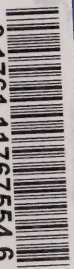


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CANADA, Mines and Technical Surveys, Dept. of
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DEPARTMENT OF MINES AND TECHNICAL SURVEYS
GEOGRAPHICAL BRANCH

KOREA

A GEOGRAPHICAL APPRECIATION

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FOREIGN GEOGRAPHY INFORMATION SERIES

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Preface

This handbook is the fourth in the series of foreign geography reports produced by the Geographical Branch of the Department of Mines and Technical Surveys in order to "make readily available geographical data about foreign areas of importance to this country".

Canadian participation in the war in Korea has given Canadian citizens a greater interest than ever in that country.

Here the attempt is made, primarily for the friends and relatives of those who are serving in the field and for the general public, to show in broad outlines the pertinent facts about the physical, human, economic and political geography of Korea.

J. Wreford Watson,
Director, Geographical Branch.

Acknowledgements

This report was prepared in the Foreign Geography Research division of the Geographical Branch by Gordon D. Taylor. Maps and illustrations were prepared in the Cartographical division under Roman T. Gajda.

The overall preparation of the report was supervised by George A. Bevan who also wrote the Introduction.

J. Wreford Watson,
Director, Geographical Branch.

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Introduction

Within recent months much of world interest has focused on the narrow peninsula which forms an historic bridge between China and Japan - the Korean Peninsula. The role of this peninsula as a buffer state between China, Japan and Russia can be attributed to one of the dominant factors of its geography, that of position (Fig. 1). Located on the east coast of Asia between Latitudes 34° and 43° North the Korean Peninsula roughly straddles the 127th meridian east longitude. Jutting southward some 600 miles from a broad continental base it separates the Yellow Sea to the west from the Sea of Japan to the east. Along its continental border Korea fronts principally on Manchuria with a small frontage on the U.S.S.R. in the northeast. The northern boundary is for the most part a river line backed by rugged mountain chains and throughout history has posed a problem of settlement and transportation. As a result Korea's land-gates, on the coastal flanks of these mountains, have played an important role in its history. Its sea-gates too across the Yellow Sea to China and across the Sea of Japan to the Japanese Islands have enjoyed periodic importance.

As is characteristic of peninsulas throughout the world its natural situation has removed it from the main streams of continental migration and war and yet permitted periodic rejuvenation of its civilization. Whereas semi-isolation tends to produce provincialism these periodic cultural invasions have developed in Korea a cultural pattern which incorporates much of their neighbours' ways of life and yet is significantly different from them.

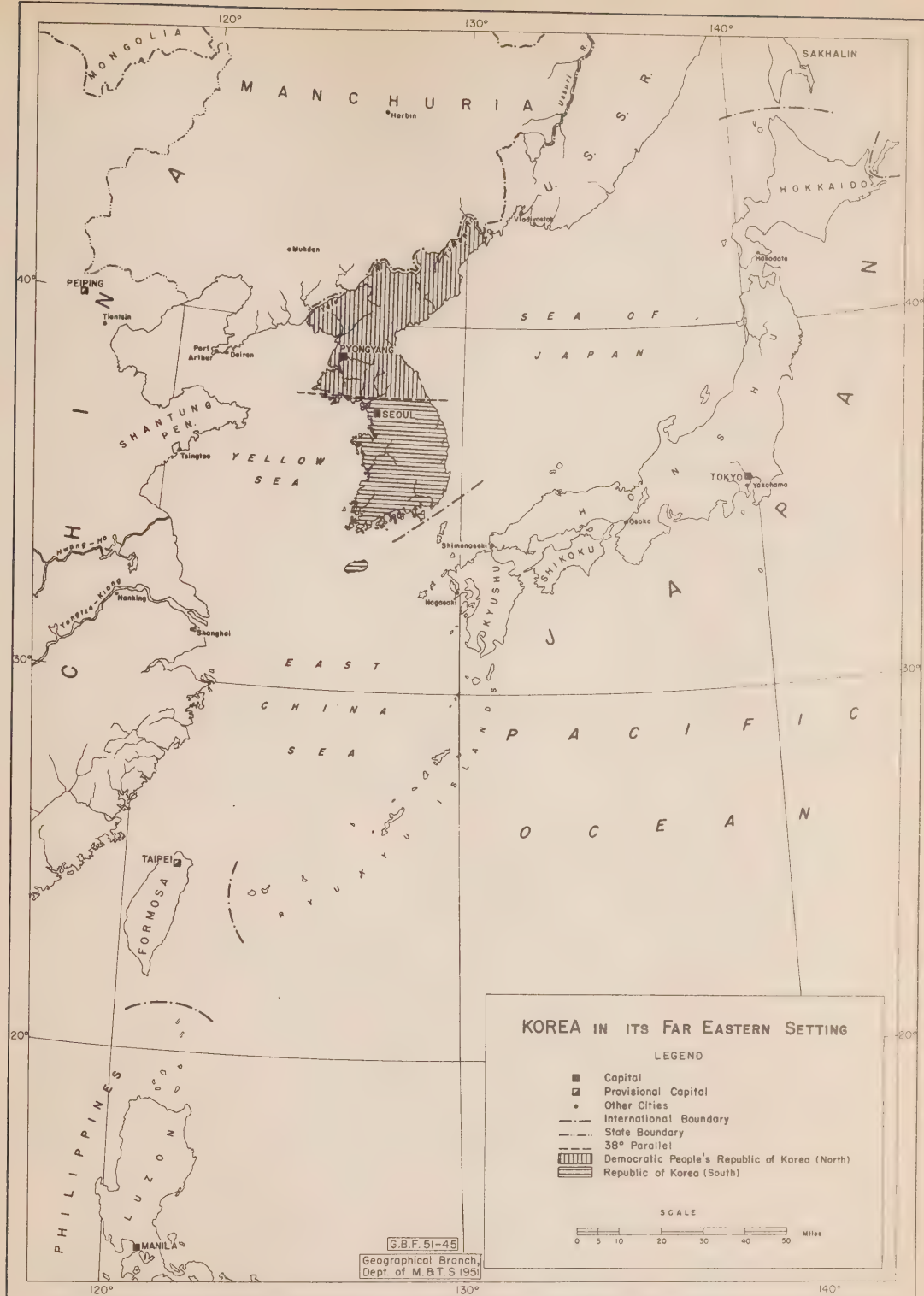


Fig. 1

Geologically the peninsula is a part of the great circum-Pacific ring of youthful mountains that sweeps from the Andes northward through the Rockies to eastern Siberia and southward through Korea and the island chains of the western Pacific. Considered in general terms, the mountains of Korea can be said to have two general trends: one across the northern boundary of the peninsula and isolating Korea from its Asiatic hinterland except along its maritime margins, and the other along a north-south axis which splits the peninsula into an eastern and a western portion. This latter ridge is closer to the east than to the west. The only significant break in this T-formation of mountains is that referred to as the Seoul-Wonsan corridor a depression running roughly north-south from the port of Wonsan on the Sea of Japan to Seoul on the western plains. On either side of this central mountain ridge lie the lowland areas of the peninsula. The most extensive, highly developed and fertile plain lies in the west, whereas that to the east is practically limited to a narrow coastal strip broadening in bay-head areas.

This rugged back-bone of the Korean Peninsula has induced settlers to concentrate on the fertile plains of the west. Indeed this plain early developed because of its land connections with the Chinese hinterland. The bay-head plains of the east coast on the other hand, witnessed much later developments since they are connected not so much with migrations to or from the Asiatic continent but rather with the development of maritime interests of fishing, shipping and commerce.

The Korean climate cannot readily be overlooked in the role it has played in the development of the peninsula. From the tip of Korea in the south to the northernmost extremity one finds variations in the climate

from the sub-tropical of southern Japan to the continental climates of Siberia. Climatic influences are particularly reflected in agricultural and settlement patterns. In the north population is relatively sparse in the higher, colder, drier areas and concentrated in the river valleys where crops can be harvested annually. Overall densities average less than 400 per square mile. To the south, and particularly along the western plain, populations become more dense and agricultural activity more intense. The greatest agricultural yields are in the southwest where climatic conditions will permit the harvesting of two crops annually. Population densities in this area are everywhere over 400 per square mile and in particularly rich areas exceed 600 per square mile.

Mineral resources, on the other hand, tend to pull settlement farther north. In a sense the old Korea showed regional specialization of the north in mining, and the south in agriculture. Since these were developed primarily as extractive enterprises under Japanese control very little was done to develop an extensive primary industry and even less assistance was given to finished metal production.

In consequence Korean industry was essentially concerned with the first-stage processing of its raw materials; agricultural and mineral. However, widespread cottage industries, producing light consumer goods, produce quite important industrial concentrations. Heavy industries have concentrated in the northwest and northeast where they have access to local raw materials and to tide water. In spite of locally dominant factors the economy of the peninsula remains unitary with the northern and southern portions offering mutual support.

Korea's political development too has shown certain regional tendencies and affiliations but the basic pattern of its "oneness" had never been completely disrupted until the end of the Second World War. Then the selection of an arbitrary line resulted in the economic and political re-orientation of the two Koreas into major spheres of influence, that of the U.S.S.R. and the United States.

Modern Korea has become a geographical stage on which the interests of major world powers have not always coincided. Considering its past history the importance of the role it plays and will play cannot be overlooked. This study has been prepared, therefore, with chief regard to the more lasting qualities of the Korean culture and environment. Needless to say significant changes in the Far East have occurred and are still occurring so frequently that no attempt to be timely could be made.

CHAPTER I

PHYSICAL GEOGRAPHY

Possibly the best description of Korea is embodied in its name, which, when translated, means "Land of High Mountains and Sparkling Streams". Few writers on Korea fail to make this comparison. Thus Cressey remarks: "Korea is a land of mountains. From the air they seem to be without number; range after range extend to the horizon so that the land resembles a sea in a heavy gale".¹

Geology

The varied relief is due largely to Korea's geological structure, as a unit in one vast circum-Pacific ring of youthful mountains that sweeps from the Andes through the Rockies to Eastern Siberia, Korea and the island chains of the Western Pacific. The mountains have suffered a great deal from erosion, yet still remain comparatively rugged because of the hard rocks exposed at their core.

The Korean Peninsula consists mainly of resistant gneisses and granites with these two rock types occupying more than one half the surface area of the country.

Korea is essentially the crest of a dome-shaped structure resulting from subsurface warping as masses of granite intruded the overlying strata. This structure is of value as the origin of many ore deposits of the country. (A similar intrusion is responsible for most of the mineral occurrences of British Columbia).

¹ Cressey, G.B. Asia's Lands and Peoples, New York, McGraw-Hill Book Company Inc., 1944, p. 235.

The peninsula can be divided into two geologic areas, separated by a pronounced depression, which extends as a defile diagonally across the peninsula from Wonsan to Seoul. Most of the older rocks are found north of this depression whereas the younger rocks occur principally in the southeastern tip of the peninsula. These facts explain the difference which may be marked between the landscapes of northern and southern Korea.

Physiography¹

When considered against the background of the continent of Asia, Korea assumes a surprising degree of physical unity. Cut off from Manchuria on the north by a series of high, rugged mountains and bounded on the west, south and east by ocean waters the peninsula is relatively isolated from both its hinterland and the insular foreland of the Pacific islands. Yet within this broad concept of physiographic unity it is possible to determine significant local variations.

Ten areas with different landforms are recognizable in Korea as indicated in the accompanying physiographic diagram, Fig. 2. The division of the peninsula into physiographic provinces can best be understood by a careful study of this diagram. The boundaries of these provinces are shown in Fig. 3. There are four distinct regions in the north; a central transition zone; and five regions in the south. They dominate the patterns of transportation and settlement in the peninsula.

1. Northern Interior: This physiographic province, high and mountainous, is cut off from the northeast coast by a fault scarp. The slope is more gentle towards the southwest. Essentially an area of

¹ Based on Robinson A.H. & McCune S. Notes on a Physiographic Diagram of Tyosen (Korea) Geog. Review. Vol.31. No.4, Oct. 1941, p.653-8.



(After Geographical Review, Vol.31 No 4 1941)

Fig.2

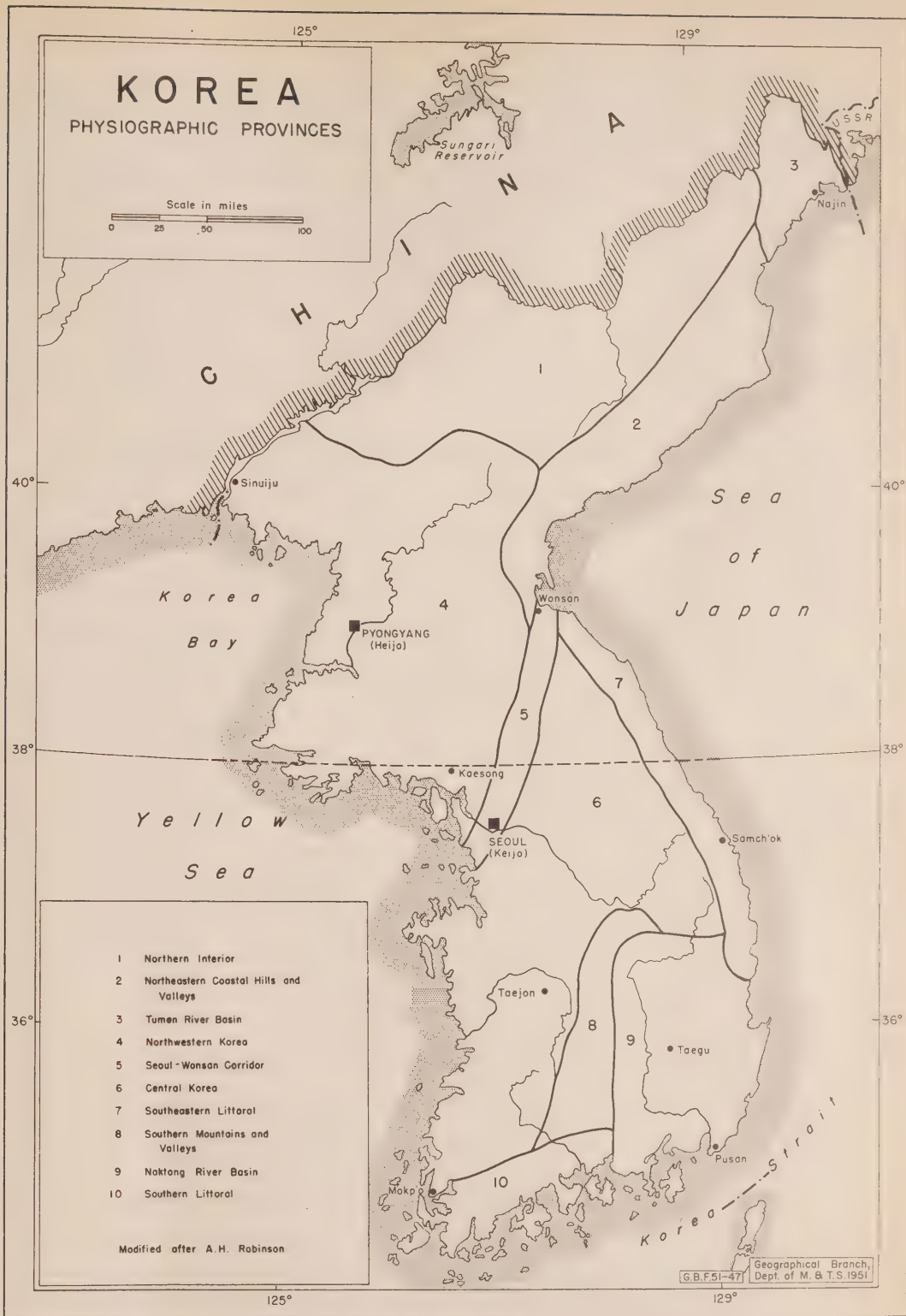


Fig.3

highly eroded old rock formations, volcanic activity during the last Ice Age has covered part of the surface with basaltic lava. The area was later uplifted and its rivers became deeply entrenched. As a result banks are everywhere steep. The structure of the area is further complicated by small faults and sections of rock highly resistant to erosion. There is relatively little level land. Indeed, the rugged nature of this area has tended to make it a natural barrier between Korea and its Asiatic hinterland.

2. The Northeastern Coastal Hills and Valleys: This province is a narrow transition zone between the Northern Interior region and the Sea of Japan. The area is a complex of old granitic rocks. Many of the short streams that flow from the escarpment on the west border of the region have deeply entrenched themselves. As a result the area appears as a series of hills interrupted by narrow valleys at the mouths of which occur small alluvial plains.

3. The Tuman River Basin: The Tuman River area is not well known. It is thought to be somewhat similar in structure to the Northeastern Coastal zone although in some areas sedimentary strata have been down-faulted into small basins. The Tuman River Valley provides an important routeway between the Sea of Japan and Manchuria.

4. Northwestern Korea: Northwestern Korea is a region of low hills and extensive plains along the Yellow Sea. For much of geologic time it was a trough into which erosional debris from the older upland areas was deposited. The structure was complicated by strong crustal disturbances during a later geological period. This resulted in a gentle rolling landscape grading from a predominance of level land in the west to higher elevations in the east.

5. The Seoul-Wonsan Corridor: A north-south trending fault valley or depression linking Seoul and Wonsan provides the only natural routeway from the central west coast to the northeast coast. Extensive flows of basaltic lava which appeared during a later geological time cover parts of the corridor, especially in the central section. This lava field is known locally as the "Iron Plain".

6. Central Korean Province: Geologically the central Korean province is an upraised crustal block, which has been subjected to folding, faulting and erosion. Extensive plains and rounded hills occur along the lower course of the Han River. The highest part of the province is the Daihaku Range which parallels the Sea of Japan.

7. The Southeastern Littoral: This province is essentially the foothill zone on the eastern flank of the Daihaku Mountains. The area consists of a series of small river valleys separated from each other by rocky headlands.

8. The Southern Mountains and Valleys Province: The zone which extends southwards from the Daihaku Mountains and separates the basin of the Naktong River from those of the Han and Kum Rivers is called the Southern Mountains and Valleys Province. The Syohaku Mountains which form the backbone of the province trend westward from the Daihaku and terminate in a series of parallel ridges, the highest of which is the Tiri Mountain. The major range narrows at Syuherei and provides a pass for the Pusan-Seoul railroad.

9. The Naktong River Basin: The basin of the Naktong is a complex of hilly country which consists of a series of structural basins and river flood plains separated from one another by low hills.

10. The Southern Littoral: The southern coast of Korea is a maze of islands, peninsulas, abrupt hills and minute plains. Extensions of the Syohaku Mountains reach the coast at low elevations. They have been faulted and break down into small tectonic basins. Structural weaknesses have, in part, determined the drainage of the area.

Rivers

Because of the narrow width of the peninsula there are no long rivers. With the major divide close to the east coast the most important rivers flow westward into the Yellow Sea or feed the Yalu and Tuman systems in the north. The principal rivers of the west coast - the Yalu, Taedong, Han and Kum, are navigable for short distances from their mouths. Similarly the Sunjin and Naktong draining to the south are navigable for small craft. Rivers draining eastward are short and swift and have little or no value as navigable routeways. Most of the rivers have steep banks which prove barriers to movement across them.

Coasts

1. East Coast: The northern part of this coast is tortuous and has a number of natural harbours, such as Najin, whereas the southern part is relatively unbroken. The coast, backed by high mountains, has a series of small coastal plains fringed by numerous sandy beaches.

2. South Coast: This section of the Korean coast is characterized by many small bays and coastal indentations and by several hundreds of off-shore islands. The bays provide many good anchorages. It is along this coast that the best Korean port, Pusan, is located. Long beaches are common throughout the length of this coast. In the western part bays are fronted by drying flats.

3. West Coast: This part of the coast is irregular, indented by several estuaries, encumbered by shoals and fringed with many islands. The channels are narrow, difficult and often shallow. Broad mud flats extending off-shore are quite common. There are usually strong tidal currents flowing through the channels between the islands of this coast. Tides along this coast are excessive as a result of the narrowing of the Yellow Sea. Indeed, tidal variations of 18 to 30 feet are not uncommon.

Climate ¹

General Conditions. Korea, extending southward as a peninsula from Latitude 43° N. to Latitude 23° N., is affected by both temperate and subtropical systems of weather. In addition, it is influenced by continental conditions from the adjoining interior and maritime ones from the Pacific. These tend to accentuate normal seasonal differences as pressure belts move north and south across the country.

During the winter Korea lies in the path of cold, dry air moving outwards from a central Asiatic high pressure area over Lake Baikal. Its weather is then quite Siberian. In summer, when the reverse is true and the Asiatic low pressure system is dominant, Korea is influenced by warm, moist air moving inland from the Pacific Ocean. There are also periodic variations from high to low pressure which indicate the passage of cyclonic storms. As is true in Eastern Asia generally, winter winds are stronger and more regular than summer winds.

Korea is also affected by typhoons, which usually occur in the southern parts. There is generally at least one a year though rarely

¹ Based on various publications of Korean Research Associates.

more than three. They happen principally in the late summer, being most common in August.

In terms of its temperature regime Korea has a warm summer and a cool to cold winter. All weather stations except Unggi in the far north report summer temperatures over 70° F. with maximum readings in August. Except in the south all stations report January mean temperatures below freezing. At Unggi and Songjin there are three months below freezing rising to five at Chunggangjin. The north has a greater annual range of temperature than has the south, and interior stations experience a greater range than coastal stations. The frost-free period varies from 145 days in the north to 200 days in the south. Low relative humidity prevails in winter whereas high relative humidity is common in summer with monthly averages exceeding 70 and occasionally 80%.

Although there is a variation in the amount of precipitation from one part of Korea to another no place is deficient in rainfall from an agricultural standpoint. Precipitation exceeds 20 inches throughout the peninsula with many places receiving over 40 inches. It is possible to recognize three areas of light precipitation, (a) the far northeast, (b) south of the Taedong River and (c) the northern interior; four areas of heavier than average precipitation exist (a) the south coast, (b) the southern slopes of Western Kaima escarpment, (c) around Wonsan and (d) southwestern Korea. The maximum precipitation comes in summer as a result of the influx of warm moist air from the Pacific Ocean with the pressure conditions creating the Summer Monsoon. Because Korea is under the influence of cold, dry continental air during winter there is little precipitation during this season. Cyclonic storms bring some precipitation particularly in spring to parts of Southern Korea.

Climatic Regions. The regional variations of these weather conditions are very important in the life of Korea, particularly in agriculture. They are well described in the work of Dr. Shannon McCune, whose classification is used here (Fig. 4).

1. Northern Interior: This region with its plateaus and high mountains has the lowest temperatures of any region in Korea. Yearly averages of temperature range from 37° F. in the interior to 44° F. near the coast. Winters are very cold with December, January and February having mean temperatures below 14° F. Throughout the whole region five months are below freezing. Spring and fall are short seasons of about one month each. There are three months of the summer when warm temperature ($50-68^{\circ}$ F.), prevail, and two months, July and August, when mean monthly temperatures exceed 68° F. Throughout this region precipitation is not heavy ranging from 24 to 40 inches per annum with a definite summer maximum in July and August. It is mainly an area of millet and barley with fast-maturing rice in the bottom of the river valleys. Both physiography and climate tend to confine settlement to the riverine areas.

2. Northeastern Littoral: As in the Northern Interior region, the Northeastern Littoral possesses a cold winter and a warm summer coupled with a hill and valley terrain. Mean monthly temperatures below freezing prevail during December, January and February. In the northern areas of the region March also experiences temperatures below freezing. July and August are warm months with a few places having August temperatures in excess of 68° F.

The Northeastern Littoral has a summer maximum of precipitation with August being the wettest month. Winter is usually dry with some precipitation occurring in the southern section of the region.

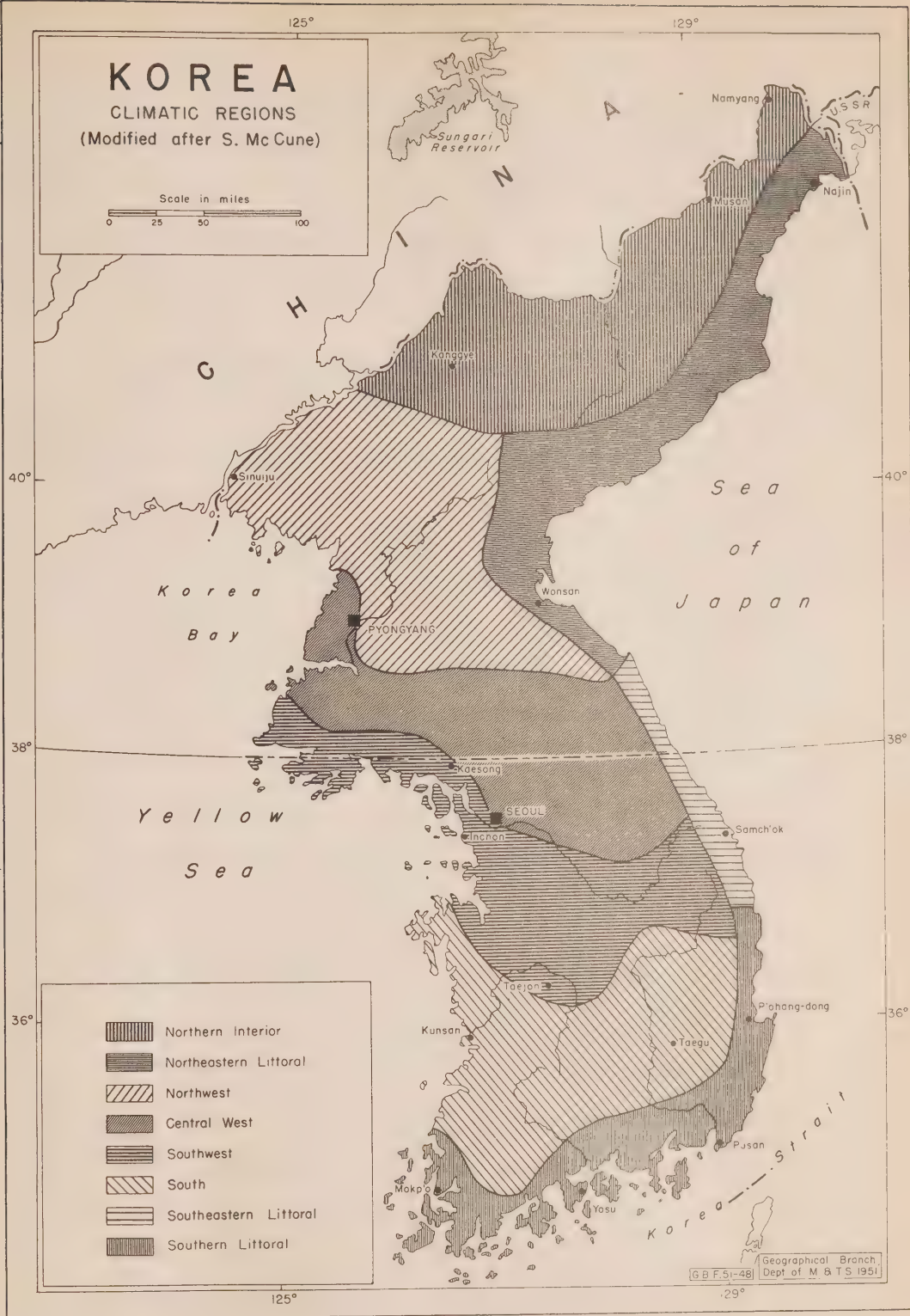


Fig.4

Fogs are a common feature of the climate of this region. They are caused by warm air from the land, or from the sea to the south and east, mixing with the cooler air over a cold, off-shore current. During some years these fogs have caused crop failures. As in the other mountainous areas of North Korea population densities seldom exceed 200 per square mile.

3. Northern West Korea: Cold winters and warm summers are also the general rule within this region. However, the warm season is rather longer and three months have mean monthly temperatures over 68° F.

As is common throughout northern Korea there is a summer maximum of precipitation. Total annual amounts of precipitation vary from place to place as a result of relief. Stations on the southern and western slopes of the mountain barriers are the wettest in the region. Unlike other areas of North Korea this area experiences only limited local variations due to the predominance of rolling landscape. Winter is dry and relative humidity is low. It is the season of clear skies and maximum amounts of sunshine. The whole of the western portion of this area forms part of one of the major industrial areas of the peninsula.

4. Central West Korea: Winter is again cold whereas the summers are warm. There are three months with mean monthly temperatures below freezing and three months above 68° F. Summer is the season of maximum precipitation with some stations reporting a second maximum in April. Winter is the dry season throughout the entire region. This is one of the most important agricultural areas of the peninsula.

5. Southern West Korea: Winters in this region are cold but are not as long as those of the more northerly regions. Its more southerly

latitude, coupled with the moderating influences of the Yellow Sea, tend to exercise control over intensely cold air from Siberia. Only one month, January has a mean temperature below freezing. August is the warmest month, but there are four months when the temperature is over 68° F. The transitional seasons of spring and fall are longer than those of the more northerly regions.

Precipitation is usually over 40 inches per year with the northern sections being somewhat drier than the rest of the region. Maximum precipitation occurs in July as does maximum relative humidity. The southern part of the region has a second maximum in April - a feature common to southern portions of the peninsula.

6. South Korea: The South Korea region has one cold month - January and four hot, summer months. The winter season is not severe thus making it possible to grow winter crops. There is abundant precipitation in this region with the heaviest annual rainfall occurring along the southern slopes of the mountains. A second precipitation maximum occurs in April. Winter is the driest season of the year. With a climate conducive to double cropping this area has the most intensive agriculture and the highest population densities of the peninsula.

7. Southeastern Littoral: The southeastern coast, protected by a high mountain barrier from the northwestern winds, enjoys the mildest climate in Korea. Because of the moderating influence of the Sea of Japan winters are not long although there may be some weeks below freezing. On the other hand, the extreme heat of summer lasts for but a short time. The region experiences precipitation throughout the year with a maximum in July associated with the Monsoons. A second maximum

in April reflects the influence of cyclonic Yangtze Storms. This is an area of summer cropping with a relatively good yield, however, agriculture is limited by the proximity of the mountains to the coast.

8. Southern Littoral: The southern tip of Korea is the warmest in the peninsula. It is the only climatic division that lacks a definite cold season with sub-freezing weather. This can be attributed to the protection afforded by the mountains to the north and the moderating affect of the southern latitude and warm ocean currents. Four or five months may be classified as cool but no month has a mean temperature below freezing. The summer season is long and hot. The area is subject to heavy precipitation with a July maximum and a second maximum in April. Rain occurs at all seasons. The absence of a distinct cold season reflects itself in the characteristic double-cropping to gain a maximum agricultural yield. Throughout the area population densities are everywhere over 400 per square mile.

In review, there is a contrast between the climates of North and South Korea. The Northern part of the peninsula is characterized by long, cold, dry winters and hot, wet summers. In the south, winters are somewhat milder and precipitation occurs throughout the year. In all cases maximum rainfall is associated with the summer season. In the north and east physiographic boundaries tend to coincide with those of climatic regions whereas in the west and south latitude and position relative to warm water are the more prominent of climatic factors.

Vegetation ¹

The principal vegetation of Korea is forest. The following discussion, therefore, is chiefly concerned with types of forest cover found throughout the country.

In 1936, 77.5% of the surface area of the country was classified as forest land. Of this 70% actually had forest cover, the remainder being bare and badly eroded. A demand for firewood in the populous south has resulted in stripping hillsides of their forest cover. Indeed, in densely populated lowlands forests are practically non-existent, although extensive reforestation projects have been undertaken. Northern forests have not suffered as greatly.

Forest Regions

The forest regions vary as those of climate, the northern forest types consisting chiefly of coniferous evergreens and the southern ones of deciduous or evergreen broadleaved trees. The climatic regions of Korea have been used as a basis for regional discussion.

1. Northern Interior: The high interior of northern Korea has the most extensive forest area of the country and the only large areas of natural vegetation. Three types of forest can be recognized in this region:

- (a) fir-spruce forests
- (b) larch-spruce-fir forests
- (c) larch forests.

In general coniferous trees are more abundant in the eastern sections whereas larch tends to predominate on southern slopes. Tall ground vegetation, commonly associated with larch forests, is in evidence.

¹ Based on various publications of Korean Research Associates.

2. Northeastern Littoral: This area, being somewhat transitional, had an original mixed forest cover with poplar and willow forming dominant species. However, much of the area has been cut over and slopes lay bare and open to erosion. To remedy this situation a major reforestation scheme was undertaken some two decades ago. Particular emphasis has been on reforesting hillsides and coastal sand dunes. Present forests thus have a contour-like appearance.

3. Northern West Korea: In this region there are many stands of red and Korean pine with some deciduous trees.

4. Central West Korea: Central West Korea has extensive forest cover in the mountainous lands towards the south. At higher elevations spruce and fir predominate whereas on lower hills pine or scrub oak are more common. From a commercial standpoint the most important are mixed forests. Deciduous trees occurring in these forests include elms, beech, maple and poplar.

5. Southern West Korea: This densely populated region has been largely deforested. However, in the interior where settlement is limited some good stands of deciduous forest still remain. Reforestation with pine or scrub oak has been undertaken on some of the lower hillsides.

6. South Korea: Natural forests in South Korea are found only in mountainous areas. Prior to the Second World War planned woodlands of pine and scrub oak were started throughout the area. Pools, interspread with occasional bamboo thickets, are common along roadsides and irrigation ditches.

7. Southeastern Littoral: The southeastern coastal area has been largely denuded of forest cover. However, there are pre-war reforestation projects of pine; these trees were classed as young trees in 1938. Poplars have been planted along ditches and a combination of grass and larch has been planted on exposed hillsides to prevent erosion.

8. Southern Littoral: The natural vegetation of the southern tip of the peninsula is that of broadleaved, evergreen forest. The characteristic tree is the bamboo. It is commonly found around farmhouses and as a hillside crop. Extensive reforestation with pine has occurred throughout the region, on the higher, cooler slopes.

Minerals

Taken as a whole, Korea is fairly well mineralized. However, it should be noted that the bulk of the country's mineral wealth occurs in the north. It has the basic mineral requirements of heavy industry in extensive deposits of iron and a good grade of coal. It is also fairly well off for gold and graphite with lesser amounts of tungsten, copper, lead, alunite, zinc and magnesite. Figure 5 shows mineral distribution throughout the peninsula and Table 1 shows the distribution of mines between North and South Korea.

TABLE 1 - Division of Mines between North and South Korea.

<u>Mineral</u>	<u>North Korea</u>	<u>South Korea</u>
Alunite	4	2
Chromite	2	0
Coal	67	20
Copper	13	24
Gold	39	40
Graphite	147	35
Iron	19	5
Lead	45	30
Magnesite	4	4
Tungsten	20	23
Zinc	15	10

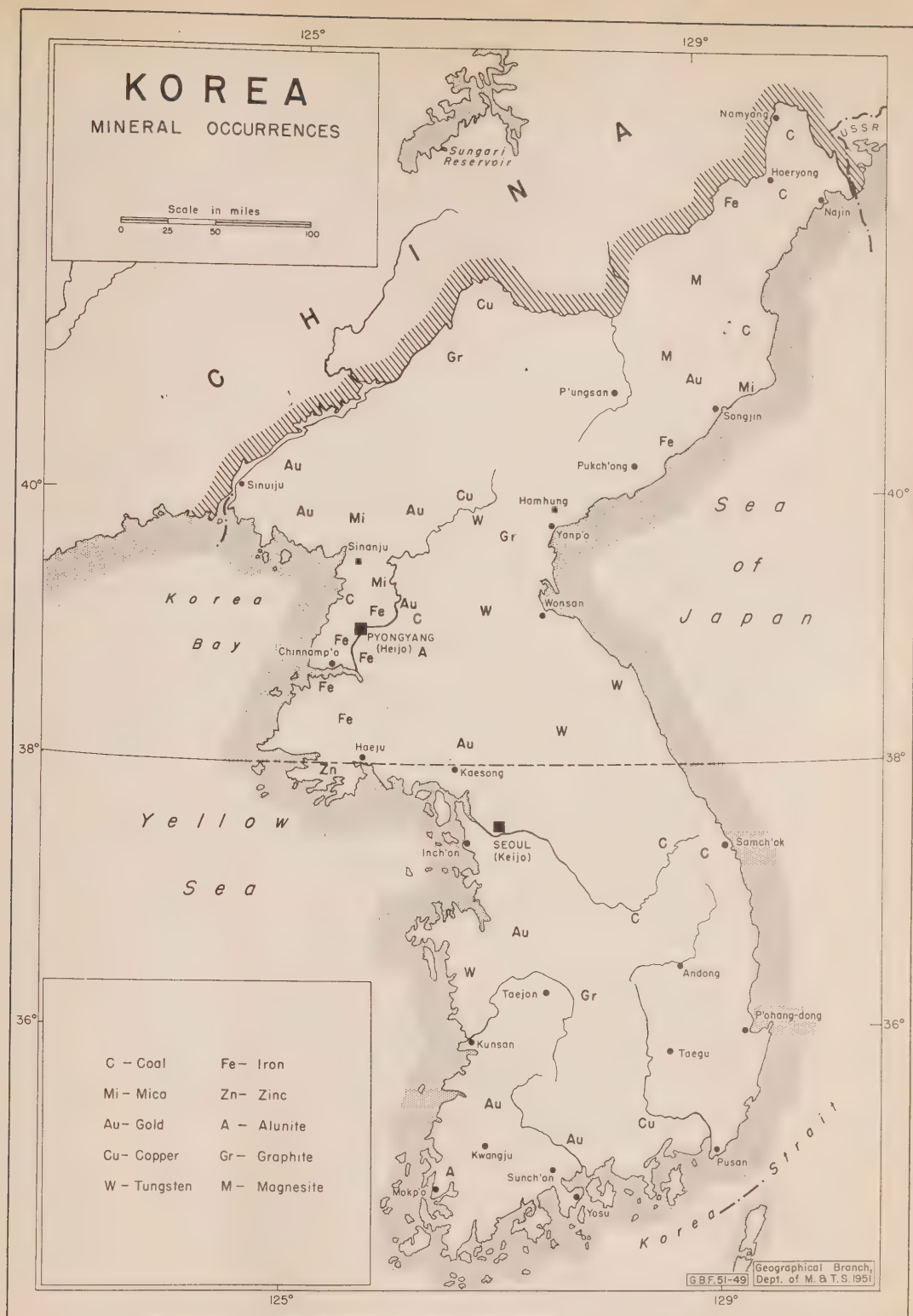


Fig.5

1. Iron: There are three areas of iron concentration in North Korea and a small area in South Korea. The most important deposits lie in the west from Haeju to Pyongyang. There are two deposits in the east, one at Iwon on the coast and another near the Manchurian border north of Nanam. The ore, chiefly limonite with some hematite deposits, is found in association with limestone.

2. Coal: Korea is relatively well supplied with coal. A pre-war estimate placed the total reserves at 1.5 billion tons of which 67% was hard coal and the rest lignite. There is little bituminous coking coal. The largest deposits in South Korea are at Yongwol and at Samch'ok on the east coast. The Samch'ok mine accounts for 50% of South Korean coal production. In North Korea there are important coal deposits in the northeast with the largest reserve near Hamhung. The largest producers are near Pyongyang.

3. Gold: This mineral is found throughout the peninsula in lode and alluvial deposits. Lode deposits are associated with areas of gray gneisses, quartz veins or contact deposits. Reserves of gold in South Korea are promising, although hard to evaluate.

4. Graphite: Graphite occurs in Korea in two forms each with its own rock association. A crystalline variety occurs in veins while an earthy type occurs in metamorphosed sediments. Although Korea is a large producer of graphite, the mineral is usually of a poor quality. The largest deposits are near Sangju in South Korea. Here lies an estimated reserve of 555,000 metric tons.

5. Lead and Zinc: Lead and zinc deposits in Korea were of great importance to the Japanese during the Second World War. Deposits occur at Kumhwa in North Korea and along the west coast in South Korea at Onggin. This latter deposit contains the only ore that is workable without a subsidy or extremely high market price.

6. Tungsten: Reserves of this mineral are considered to be among the most valuable in Korea. Estimated reserves of tungsten (containing 1% or more of tungsten oxide) approximate 2,700,000 metric tons. More than 90% of this reserve is contained in the Sangdong deposit in South Korea. This reserve may be augmented by deeper exploration and development. In the opinion of American economic experts, tungsten may some day become one of the major export items of South Korea.

7. Other Minerals: Small deposits of fluorite, lithium, molybdenum, pyrophyllite, and a few rare-element minerals are found in the southern portion of the peninsula. Their value, however, is limited.

Summary

In retrospect it can be seen that Korea is essentially a rugged peninsula with a relatively high mountain core parallel to the eastern coast. Plains are limited to the west and river valleys. Its climate is greatly influenced by its diverse relief. It varies also from a humid, sub-tropical type in the south to a humid, continental type in the north. Throughout the peninsula its vegetative cover is a reflection of both land and climate. Being set on a huge, metalliferous intrusion the Korean Peninsula is relatively well endowed with minerals.

In all, the physical aspects of the country's geography have tended to create isolation from both insular and continental Asia. High and rugged mountains in the north isolate Korea from its Asiatic hinterland along most of the Manchurian frontier. Only on the flanks of this mountain barrier lie the land routes to the interior of the continent. On the northwest access is afforded by the relatively broad plain of the Manchurian routeway and on the northeast the narrow Siberian routeway leads to the Far Eastern areas of the Soviet Union. Elsewhere the Korean Peninsula is bounded by water. The narrowest stretches of water lie between the southeastern tip of the peninsula and Japan and between western Korea and the Chinese mainland; these constitute the Japanese and Chinese water gateways to Korea. Both aspects of Korea's boundaries are reflected in the human geography of the area. Thus open water and high mountains have restricted free and easy movement of peoples between the mainland and islands and the Korean Peninsula. The influence of physical barriers was such as to restrict movement to those occasions and areas where social pressure was such as to overcome the obstacles. In effect, these barriers have tended to punctuate the history of migrations in Korea. Thus after cultural stimuli had moved either in or out of the peninsula relative long periods of isolation prevailed. In this period the Korean people developed a culture significantly different than that of any of its neighbours. It is in these periods it earned the name "The Hermit Kingdom".

CHAPTER II

HUMAN GEOGRAPHY

THE PEOPLE

A. Ethnic origin

The Korean people are a mixed race of disputed origins. They are considered to be of Mongoloid and Ainu stocks with infusions of Malayan blood. There is an historic link between the early inhabitants of western Japan, Manchuria, the south Siberian Coast and Korea. Beyond this area, westward in China and eastward in Japan, characteristics diverge. Thus the Koreans have a feeling of being a separate people, although too much should not be made of this.

In general, they have black straight hair, dark oblique eyes and a tinge of bronze in the skin. In stature, they are slightly taller than the average Japanese but are shorter than Northern Chinese. On the whole North Koreans are generally taller than their South Korean brothers, although ethnic provincialism has not developed to a significant degree. Whereas the political division of the peninsula into two parts may have a limited physical basis if divided along the Wonsan-Seoul depression, it has no real ethnic basis.

B. Language

The Korean language is one of the Turanian group of languages. It is spoken throughout the whole peninsula. There are no significant linguistic minorities. It is described as a polysyllabic language, and resembles Japanese much more than it does Chinese. Indeed, many words in the Korean language have a common origin with those in Japanese. However, written Korean employs Chinese characters.

During the 15th century a Korean developed an alphabet of ten vowels and fourteen consonants. This alphabet, called Eunmoon (Onmun), was looked down on by Korean scholars and consequently never became popular. The Eunmoon alphabet represents the only alphabet developed in the Orient.

From a geographical standpoint Korea forms a linguistic fusion found between the Chinese to the west and the Japanese to the east. However, peninsularity has removed Korea from the main streams of continental migration and at the same time limited the influence of its insular neighbours. Thus a semi-seclusion has helped Korea to develop a language which is significantly different from pure Chinese or Japanese. Indeed, this influence has contributed to the overall feeling of oneness or nationalism which characterized the earlier political tendencies of Korea.

C. Religion

The classical religions of Korea have been Buddhism and ancestor worship associated with Confucianism. Buddhism was introduced into Korea during the 4th century A.D. from China and became the paramount religion of the country. The power of the Buddhist hierarchy had become so great that a Protestant movement developed and overthrew it in 1392. During its greatness, Buddhism was passed on to Japan. The latter revived it in Korea after 1911. By 1935 Korea had some 167,000 believers and adherents, a relatively small proportion of its population.

After the expulsion of Buddhism, Confucianism became the prime religion of the country. Even while Korea was under Japanese domination these Confucians looked westward to China.

Christianity first appeared in Korea in 1594 when Jesuit missionaries spent some time in the country. The propagation of the Christian faith made little headway until after 1784 when the French opened a new mission. However, the new religion did not win favour at the court and was made to suffer almost continual persecution. The period between 1864 and 1873 was characterized by severe persecution of Christians with as many as 30,000 suffering martyrdom.

As a result of foreign diplomatic intervention freedom of religion was granted in 1882. Protestantism made its first appearance in 1885 when an American Presbyterian missionary arrived in the country. By 1935 there were reported to be over 460,000 Christians of all denomination in Korea. These mission stations have succeeded in introducing most of the western culture found in Korea. However, as elsewhere in the Orient, western culture is merely superimposed on a basic oriental outlook.

After the annexation of Korea by Japan in 1910 other religions appeared in the country - Shintoism and various Japanese Buddhist sects. These religions made little impression on the Koreans, and at the end of the Japanese regime they disappeared.

There is no area of Korea where any single religion is dominant. Religion does not create any significant geographical patterns and certainly knows of no difference between North and South. Formal religions count only a small percentage of the total population amongst their adherents. Animistic worship is still the major religious expression of the people.

D. Customs

To understand a people it is essential to have some knowledge of their customs, particularly those which have no obvious meaning to an outsider. Outstanding among the social forces in Korea is reverence of the family. This is no doubt associated with the deep attachment which a predominantly peasant people feels for the land. Family ownership and family labour are important ideals and practices throughout the country.

A Korean man does not attain full manhood until after marriage. As in Japan, marriage is arranged by parents or guardians with little regard to the wishes of the couple involved. After marriage the wife lives with her husband's family and becomes part of that family. Monogamy has a religious sanction, but as the purpose of marriage is the procreation of large families, extra-marital relationships are common, particularly in childless homes.

The rural basis of life is also responsible for a close "in-feeling" amongst the people. This has produced powerful moves which are not easily broken. Social pressure is strong and Koreans have a great fear of losing face. They do not like to be criticized in front of equals or subordinates. In fact they will look on such action as an insult not to be forgotten.

The rural system of landholding, which saw the concentration of estates in the hands of influential families, assisted in the development of a class system. In "Old Korea" society was divided into three classes: the landed nobles, the "Yangban" or high officials of the civil and military authorities, and scholars; the "common" group, consisting of farmers, traders and artisans; and the "low" or menial group of butchers, actors and monks.

These classes were legally abolished in 1894 but did not entirely disappear until after 1910. The only class legally remaining during the Japanese regime was that of the nobles of royal or princely birth. This last class disappeared after the collapse of the Japanese Empire. The word "Yangban" is still used to describe persons of wealth although the old class significance of the term has disappeared.

The ideas of class have undoubtedly received new significance because of the challenge of ideologies in post-war Korea. From the north the U.S.S.R. has propounded the theory of a "classless" society, to be achieved through the stage of a "one-class" society, a theory which has been to some extent put into practice in North Korea replacing the old idea of Japanese "land-class". On the other hand, the post-war redistribution of land in South Korea has also tended to destroy the Japanese "land-class". In part, this has been replaced, and certainly influenced by, the American "money-class" society. Thus today Korea represents a meeting ground of Soviet and American social organization.

CULTURAL RELATIONS WITH THE REST OF THE ORIENT

The central position of Korea between China, Japan and Siberia has resulted in marked cultural influence being exerted by these countries.

The traditional founder of Korea was a Chinese noble called KI-JA who left China with 5,000 followers in 1122 B.C. and established a state in Korea. The first authentic mention in history of Korea was its annexation by China in 180 B.C. From then until the present it has been more or less always under foreign domination with brief periods of independence.

Of all its neighbours China had the greatest cultural influence on Korea. This influence was dominant until the Treaty of Shimonoseki. Buddhism was imported from China during the 4th Century A.D. Shortly after wards Chinese characters became the recognized form of writing, and finally about the year 960 almost the whole of Chinese culture was adopted. The educational system of "Old Korea" was very similar in extent and purpose to that of the Chinese Empire.

After the adoption of the Chinese religion and culture Korea had four centuries of brilliant progress and prosperity. During this period great advances were made in art and literature.

The country then became more independent in its way of life and was involved in war with China, Japan and the Manchus during the 15th and 16th Centuries. Following their ascendancy, the Manchus exacted a tribute from Korea which lasted, although diminished in amount from time to time, until 1894. During the Manchu regime Korea turned its back on the world and entered a period of isolation which was not broken until the latter half of the 19th Century. In this long period of isolation the social system in Korea crystallized into a form of feudalism which persisted down to this century.

While China has had a great effect on the development of Korea, the cultural tie between Korea and Japan is also significant. There has been contact between these two countries since the first century B.C. The Japanese learned the arts of weaving cloth, of cultivating the silk-worm, of printing books, of painting, and of making leather harness from Korea. As late as the 16th Century Korean pottery was the envy of the Japanese pottery industry.

Japan obtained an increasingly large share of Korean trade in the 19th Century and began to take a political interest in the country's development. It was recognized that Korea might be levered free from Chinese control and brought more within the Japanese sphere. Anti-Chinese sentiment was encouraged and ties with Japan were fostered. At that time Japan also wished to ensure that Korea did not fall within the then Russian sphere of influence.

However, as Russia moved into Manchuria and the situation became critical, Japanese intervention became quite open and in 1905 Japan gained control over Korea by means of a protectorate. In 1910 it annexed the country to its empire, thus becoming a continental power for the first time. The Japanese brought with them the culture of the modern world - something the Koreans had been avoiding for nearly 500 years. The old Korean regime and its customs, then declining, disappeared. Old ways of life had gone. The Japanese tried to re-orient the Korean economy to its own and thus powerfully changed the course of Korean development.

The development of Soviet interests in the Pacific led to a desire for access to the open sea. Each of the ports of the area are ice jammed throughout the winter. At all seasons of the year the Southeastern Maritime Area of the Soviet Union gained access to the sea only after passing through Japanese controlled waters. Any claim they could make, therefore, which would render the Korean Peninsula a part of the Soviet sphere of influence would drive a deep wedge into Japanese waters and could jeopardize the latter's hold on the Yellow Sea.

With the end of the Second World War Soviet interests remained the same but Japan had been displaced by the United States. However, the

U.S.S.R. and the United States, as allies, agreed to a mutual occupation of the Korean Peninsula. The arbitrarily chosen boundary, the 38th parallel, became a psychological and cultural barrier. Developments north of that line followed the Soviet pattern whereas those to the south showed a western influence.

EDUCATION

The educational system of Old Korea was similar to that of China. It was based on the classics and had as its objective the training of civil servants. This system lasted until 1894 when it was reformed. The reformation, however, met with little success. Mission schools first made their appearance in Korea in 1894. With the advent of the Japanese Protectorate Korean education came under control of Japan. As a result the old system disappeared completely.

The Japanese established separate elementary schools for Koreans and Japanese. Although the number of children attending school increased ten times from 1914 to 1936 there existed school facilities for only 18.7% of the Korean children. This compares unfavourably to 99.5% in Japan.

Since the end of the war differences have emerged between North and South Korea. Universal elementary education has been established in North Korea. Advances have also been made in secondary education. Whereas under the Japanese there were only 44 secondary schools north of the 38th parallel, there are now 720. Education has also received considerable attention in South Korea. Its educational system has been expanded in an attempt to reduce illiteracy. In March, 1947, 44% of all South Koreans were illiterate; by December, 1948, this figure had been reduced to 29%.

POPULATION

A. Growth

The population of Korea almost doubled between 1910 and 1940. In 1910 the population was 13,313,017; in 1935 it was 24,326,328; and by 1949 it had risen to 29,238,641. Its rate of growth was rapid from 1910 to 1920, when it levelled off until 1935. From that date on it started climbing rapidly again and was in full swing by 1940. The natural increase in population (1925-35) was 300,000 a year. Over the 30 year period the natural increase plus the Japanese immigration would account for nearly all the increase. At the end of the Second World War there were 750,000 Japanese in Korea.

At the present rate of growth the population of the peninsula will double itself again in less than 37 years.¹ If the amount of arable land remains constant an acre of land which supported two people in 1940 will have to support four people by 1990. Thus one of the major problems of Korea is the increasing pressure of population on the land.

During the last decade there has been a phenomenal increase in the population of South Korea. In particular, from 1944 to 1946 the population increased by approximately 25%. This was due largely to the repatriation of Koreans from Japan, the influx of refugees from North Korea and to a high rate of natural increase.

From the end of the war until the end of September, 1946, 1,877,679 people entered South Korea as refugees and repatriates.²

¹ McCune, Shannon, Confusion in Asia, Journal of Geography, Vol. XLIX, No. 5, May, 1950, p. 180.

² Pop. of South Korea by Geog. Div. and Sex. 1945, p. 4.

B. Distribution

Since a large part of the population of Korea is agrarian, population distribution is strongly influenced by relief and climate. The food markets abroad for Korean rice have greatly stimulated agricultural production and settlement. The heaviest density is found in the rice-growing plains of the west coast and of the southeast. In general, densities increase from north to south as a result of a more favourable climate which permits double cropping south of Seoul. Thus in the south a given area of land can support more people than can the same area in the north.

Since 1944 the greatest increase in population density has gone on in the already densely populated areas. Provinces in South Korea which had pre-war population densities of over 400 per square mile now have densities exceeding 500, and in two provinces over 600 per square mile.

On the population density maps (Figs. 6 & 7) the density for Kyung Gi Do province appears to have increased only slightly from 1935 to 1946. However, since 1944 Seoul City has been considered a separate administrative unit and its population has not been included with that of the province. If the population of Seoul were added to that of Kyung Gi Do the density in 1946 would have been over 700 per square mile.

The governing factors in the concentration of population in Korea have been those of land and climate. Essentially an agricultural people, denser concentrations have occurred on the relatively level land of the western portion of the peninsula than in the mountainous east. On the great western plain itself population concentration seems closely tied to that of crop yield, all other things being equal, a reflection of climate.

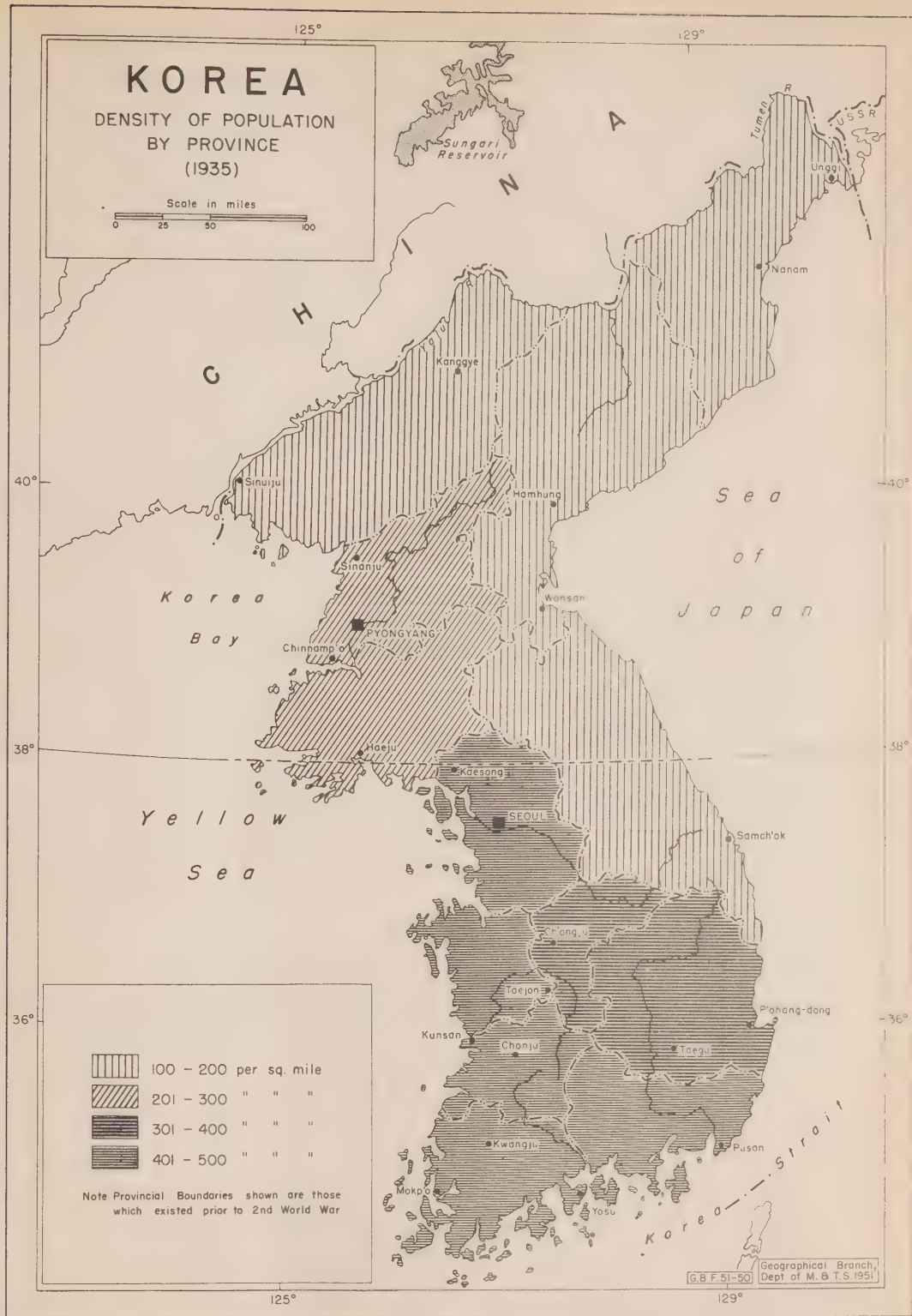


Fig.6

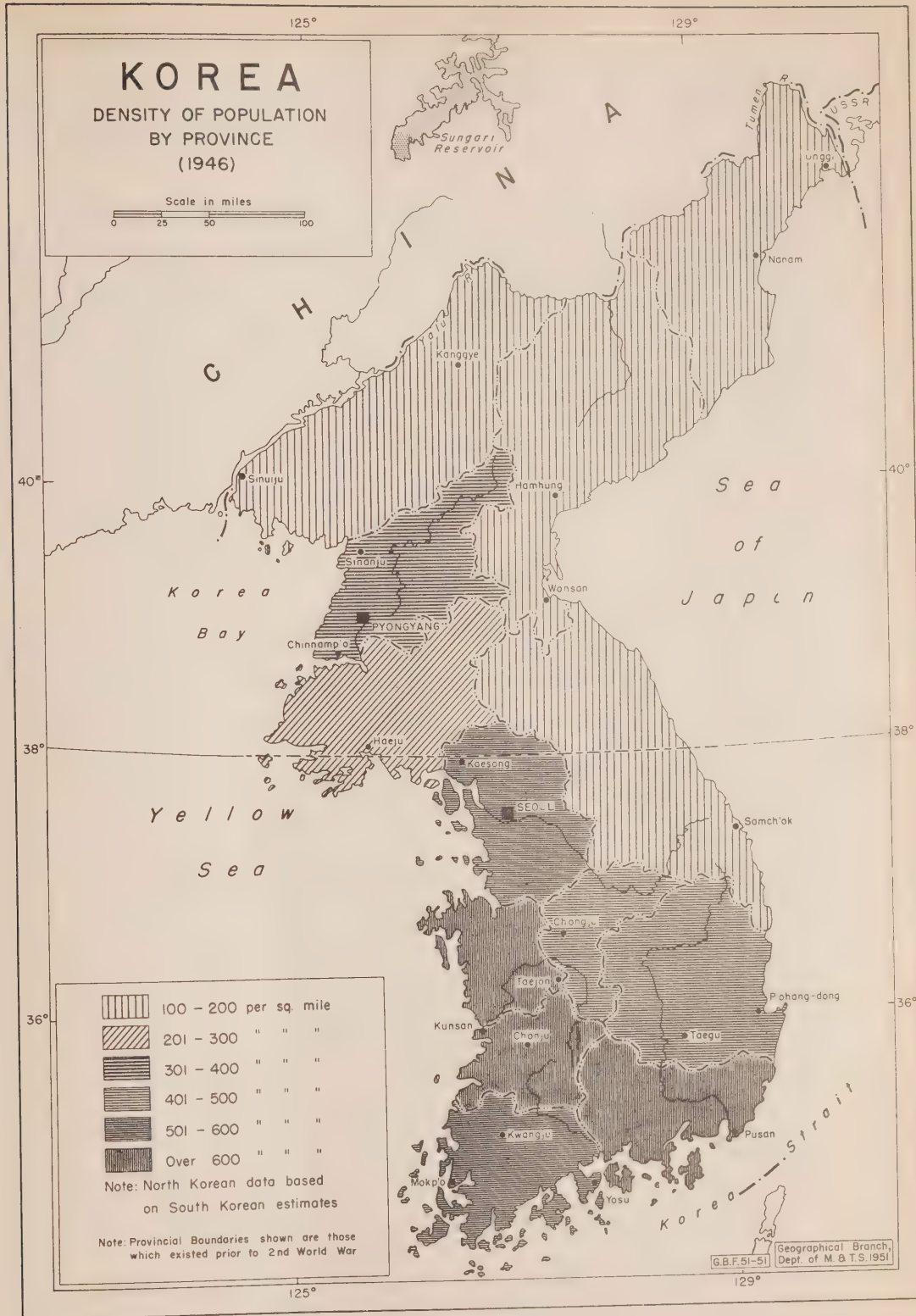


Fig. 7

Thus in the southern plain where double cropping can be achieved the densest population concentrations occur.

Superimposed on this basic pattern are population nodes which reflect industrial, trade and urban developments. Industrial sites in Western Korea are concentrated in junction centres such as Pyongyang and Seoul. Small-scale industrialization has resulted in increased urbanization of the population. Nevertheless it remains predominantly agricultural as shown in the occupational structure of the population.

C. Occupation

Peninsular people, enjoying semi-isolation from both the hinterland and the insular foreland have characteristically tended to become self-sufficient. Initial occupations were primarily those which would provide the basic essentials of life. Where the natural environment was conducive the need to gain a livelihood manifested itself in exploitation of the natural resources of the land, the forest and the rivers.

Historical links with China, where land was wealth and farming the predominant occupation of centuries, saw the initial Korean settlers turning to exploit the agricultural potential of their new found land. Eventual contact with the insular foreland of Japan, a land occupied by a people all too aware of the natural limitations of their homeland, brought about a decline in overall dependency on agriculture and an emphasis on the exploitation of other natural resources. This stimulated the development of communications, transport and primary industries.

Japan's colonial policy stressed the exploitation of extractive industries. To the beginning of the Second World War this policy was reflected in the occupational structure of the population as shown in Table 2.

Table 2 - Population Distribution by Occupation (Grouped by Families)

<u>1935</u>		
<u>Type of Occupation</u>	<u>No.</u>	<u>Percentage</u>
Agriculture, Forestry, Stock-breeding Fishery	3,043,147	73.7%
Communication and Transportation	335,064	8.1%
Public Service and Profession	194,591	4.7%
Industry	133,517	3.2%
Miscellaneous	436,657	10.3%
	<u>4,142,976</u>	<u>100.0%</u>

No post-war figures on occupational distribution are available.

D. Rural-Urban Settlement

In a country where nearly three quarters of the population is engaged in extractive industries it is natural that the majority of the people should live in rural settlements. In 1936, 88.3% of the population was classified as rural. The Korean farmer typically lives in a small agricultural village from which he goes to work his fields each day. Korean fishermen also dwell in small villages.

In the 1946 census of South Korea only cities having a population over 45,000 were listed. Some 2,462,124 people or about 10% of the total lived in these cities with nearly one half of them in Seoul. In 1940 in all Korea only 16 cities had populations exceeding 45,000 people.

As in the West, however, urbanization is characteristic of Korea. Nevertheless, one feature of this trend is worthy of note. Whereas in 1938 some 10% of all Korean nationals were city dwellers about 70% of all Japanese in the peninsula were concentrated in urban settlements.

Since the partition of the country the influx of migrating North Korean nationals into South Korea and the repatriation of Koreans from Japan have somewhat complicated the urban-rural readjustment of population. Urban centres are over-crowded with refugees. Redistribution of land has tended to counteract urbanization by inviting rural settlement at relatively low cost per family.

Cities:¹

The Korean city represents the secondary element of population distribution throughout the peninsula. Peoples are essentially concentrated in the relatively fertile western plain. Superimposed on this basic pattern is an agglomeration of people at junction points, river crossings and gateway situations.

Throughout the country the agricultural village is an important element of Korean life. Its council is in fact the local government and regulates the important elements of an agricultural society, land and water rights. In the paragraphs which follow some of the more significant cities and towns are discussed briefly:

Seoul, situated a few miles upstream from the mouth of the Han River in the heart of the western plain is the capital of South Korea. During the Japanese regime it was the seat of the Government-General of Chosen, and for five centuries before it was the capital of the Korean Kingdom. The choice of the city as a capital reflects its geography. Standing on the land route to Manchuria and looking across the Yellow Sea to the Shantung Peninsula it became an early focal point. With exploitation of the Korean northeast its proximity to the southern

¹ Population as of 1 May, 1949.

entrance of the Seoul-Wonsan trench gave it added importance. Economically it is situated in the richest and most extensive plain of the country. It has thus become a focal point of transport and distribution services. Also associated with its position is its development of industry engaged in processing agricultural products.

Before partition Seoul had some importance for its expanding primary industries, particularly iron and steel. However, with most of the mineral resources in the north no longer available to Seoul, there has been a subsequent displacement of this industry by that of textiles based chiefly on cotton and silk.

The population of the city has increased rapidly since the end of the war. It had a population of 826,110 in 1944 and 1,141,766 in 1946, a growth of 38.2% in two years.

Pyongyang, (450,000), is the provisional capital of North Korea. It is located on the right bank of the Taedong River about 25 miles upstream from the river mouth. The city is in the centre of an important mining area of North Korea and is a growing industrial centre with textile mills and electric power plants. Pyongyang is the largest city of North Korea.

Pusan, (473,619), located on the southeast coast is the largest and most important port in Korea. It is the southern terminus of the Korean trunk railway. Its harbour, with an excellent natural site, was developed by the Japanese as the main gateway into Korea from Japan. Pusan is the only port in Korea equipped with ship-building and ship repair facilities.

Taegu, (313,705), is the centre of an agricultural district in southeast Korea. The chief function of the city is as a distribution centre for the surrounding countryside.

Taegu's position in relation to routeways, and agricultural potential is significant. As a town, nestled in the fertile basin of the Nakdong River, it is located far enough south to enjoy a climate which will permit double-cropping and maximum use of the land. Located also in a strategic defile from Pusan to Seoul it represents an important cross-road of rail, road and water communication. Its relatively dense population is a reflection of these several activities.

Mokpo, (111,128), is the main seaport of the southwest coast. Its situation makes it a deep water port facing across the Yellow Sea to China. Ships entering its waters in days gone by plied their trade along the coast of China. Today it is the southern terminus of the west-coast railway line from Seoul. The port was developed in 1897 and became one of the most important export ports of Korea.

Chinampo, (68,656),¹ located at the mouth of the Taedong River is the principal port of northwest Korea. Its post-war size is thought to approach 100,000 people. Port facilities, completed in 1916, will only accommodate small ocean going vessels. Chinampo is also an important industrial centre. It possesses copper, lead and zinc smelters, and plants for the manufacture of chemicals and explosives. Prior to the war, it was one of the sites of an aluminum industry that failed to survive 1945.

Wonsan, (79,320), a seaport on the east coast of Korea at the northern end of the Seoul-Wonsan corridor, owes its importance to its geographical position. It is one of the main communication centres of the country. Near to metalliferous mountains it has lead, zinc and copper smelters. It also possesses important oil refineries for petroleum

¹ October, 1940, Census.

imported by sea. Since the Second World War its size has been estimated at well over 100,000 people.

Hamhung, located about fifty miles north of Wonsan, is an important industrial city. It is well located with respect to power with four hydro-electric plants within sixty miles of the city. Another centre of the pre-war aluminum industry, Hamhung also has chemical plants, smelters and oil refineries.

Other Cities: Najin, on the northeast coast was developed by the Japanese as an important port for the export of goods from Manchuria. Sinuiju, at the mouth of the Yalu River, is the northwestern terminus of the Korean railways. It is an important lumber and pulp and paper town. Inchon, (265,767), is the port for Seoul but is subject to periodic restrictions in its use. It suffers a tidal variation of almost 30 feet. Although some docks are approachable at this time others are useless. It is the site of an iron and steel industry and a chemical industry. Fuhei, located between Seoul and Inchon is the site of another iron and steel and chemical industry. Samch'ok, on the east coast has the only important coal deposits in southern Korea. Haeju, capital of Korea until 1392, is now the centre of ginseng production. It is a city of some industrial importance with cement and chemical plants.

E. Population Problems

One of the major problems facing South Korea is that of a rapidly expanding population and a badly disrupted agriculture. It has already been pointed out that the population increased 25% from 1944 to 1946. On the other hand, agricultural productivity declined during the war when

materials which normally would have been made into fertilizers were diverted to the explosives industry. South Korea is dependent upon North Korea for a large part of its fertilizer needs. These fertilizers which were needed to re-establish South Korean agriculture after the war were not exported from North Korea. Consequently South Korean agriculture declined still further.

The same problem of ensuring an adequate supply of food is apparently not as serious in North Korea. There, population is considerably less, and population pressure has never been a serious matter. Densities of 100 to 400 per square mile are common as compared with 400 to 600 per square mile in the South.

Press reports from the U.S.S.R. indicate that North Korea is already self-sufficient in food. These reports also claim an increase of over 15% since 1945 in the area of cultivated land and a similar increase in yield.

As a result of the division of the peninsula North Korea was left in a relatively better position to feed its population than was South Korea. It not only had control of the fertilizer supply but also was able to import food from neighbouring Manchuria. In the pre-war economy of Korea, millet was imported from Manchuria to make up any deficit in the local food supply. After the North-South division of the peninsula this source of food was lost to South Korea.

HEALTH AND WELFARE OF THE POPULATION¹

The normal diet of the Korean consists of rice, fish, vegetables, fruit and grain with smaller amounts of meat, milk, eggs and dairy products. This provides a rather poorly balanced diet, especially as the

¹ Based on Simmon J.S. et al - Global Epidemeology, Montreal, J.S. Lippincott Co., 1945.

supply of meat and dairy products is limited. Fruits and vegetables, unless thoroughly cleaned are liable to produce dysentery, which is a common complaint.

There is an abundant supply of fresh water but it is usually contaminated by night soil. Korean water should not be used for drinking purposes unless it has been boiled or certified safe by bacteriological tests. Most of the water consumed by the Koreans is used in tea and is consequently boiled first.

In addition to dysentery, typhoid fever is a common disease and is prevalent in the spring and fall. It is also estimated that from 95 to 98% of the people are affected by intestinal infections with worms. This high prevalence of intestinal infection results from the use of night soil and improper and uncleanly habits of personal hygiene. Cholera was widespread at one time but was greatly reduced by Japanese health measures. Tuberculosis is widespread; smallpox outbreaks occur regularly, although the number of cases has been reduced as a result of a Japanese vaccination programme. Other diseases common in Korea are venereal diseases, especially syphilis; malaria in the south; skin diseases such as scabies; relapsing fever; plague; rabies; and flukes.

The health facilities available to Koreans are limited. There are three hospital beds per 1,000 population as compared to 9.7 per 1,000 in the United States. However, the hospitals that do exist, usually in the larger cities, are well equipped and well staffed. At present a high death rate tends to limit the population. If medical progress continues lower death rates will greatly aggravate population increase until such time as other Western influences come into play to lower the birth rate.

Summary

It can be seen that the human geography of the Korean Peninsula weaves a pattern of unity and homogeneity amongst its people. Essentially of one stock, they speak the same language, wear similar clothes and enjoy the same customs in both the northern and southern portions of the peninsula. However, there are differences in the adaptation made by the people to the land between North and South.

In the whole of Korea, as throughout Asia, the most dominant of all problems in human geography is the land-man ratio -- the problem of equating available land and technical skill to the ever-increasing demands of an expanding population. This problem is especially urgent in South Korea.

CHAPTER III

ECONOMIC GEOGRAPHY

The economic geography of a nation is determined to a large extent by the natural resources of the country, the culture of the people, and the political life of the state. The primary factor conditioning the economic life of a country is its physical geography. How the people use the resources at their disposal depends upon the state of their culture. In the case of countries like Korea that are, or have been, a dependant part of an Empire, resource development is also conditioned by political policies and desires of the governing power.

Korea has an extensive acreage of arable land and fairly valuable mineral resources. Prior to 1910 there was not much call for Korean products abroad. China and Japan were still mainly agricultural and raised the same crops as Korea. The country had a self-subsisting rural economy and the land was the only resource that was used to any extent.

Following annexation by Japan, the Korean economy became more closely associated with that of the Japanese. Since the Japanese industrial revolution was in progress the need for minerals, fuels and raw materials for industry was increasingly felt. Japan, being poor in most industrial metals, and having an inadequate food supply for its growing urban communities, looked to Korea for assistance. Japanese technicians began to exploit other resources of the country besides the land and at the same time to make agriculture more efficient. The development under the Japanese regime seems to have been determined by advancement of Japan proper rather than of Korea. As a result, the economy of Korea became integrated with that of Japan.

After the surrender of Japan, Korea was divided into two states having a common frontier along the 38th parallel. Just as this boundary had little justification in the physical geography of the country and less in its human geography so it had no real validity in the peninsula's economic geography. Indeed, it prevented a unified economy.

For purposes of this report a discussion of Korea's economic geography outlining pre-Second World War conditions and showing the results of the arbitrary post-war division of Korea on both the peninsula as a whole and on its constituent states is considered the most useful approach to the problem.

Agriculture

Agriculture is the principal industry of Korea. Over 80% of the population is dependent upon the land for its sustenance and livelihood. In 1937, some 11,000,000 acres, or 1/5 of the total area, were cultivated but actual crop acreage was increased by over 30% as a result of double cropping. (Fig. 8).

Korean agriculture is characterized by an intense use of human labour as well as soil and drainage resources. Farms are small (3.6 acres on the average) and yields are low. Centuries of cultivation have left the soil impoverished. In common with the rest of Asia tenancy and farm debt are pressing problems. Rents are high, ranging from 50 to 90% of the yield, and interest rates on debts have been exorbitant. Korean agriculture declined during the war when the materials required for fertilizer were diverted to the munitions industry. The post-war division of Korea left nearly all fertilizer production in the North with the result that agricultural production in South Korea declined 30% immediately after the war. It recovered to some extent with United States aid.

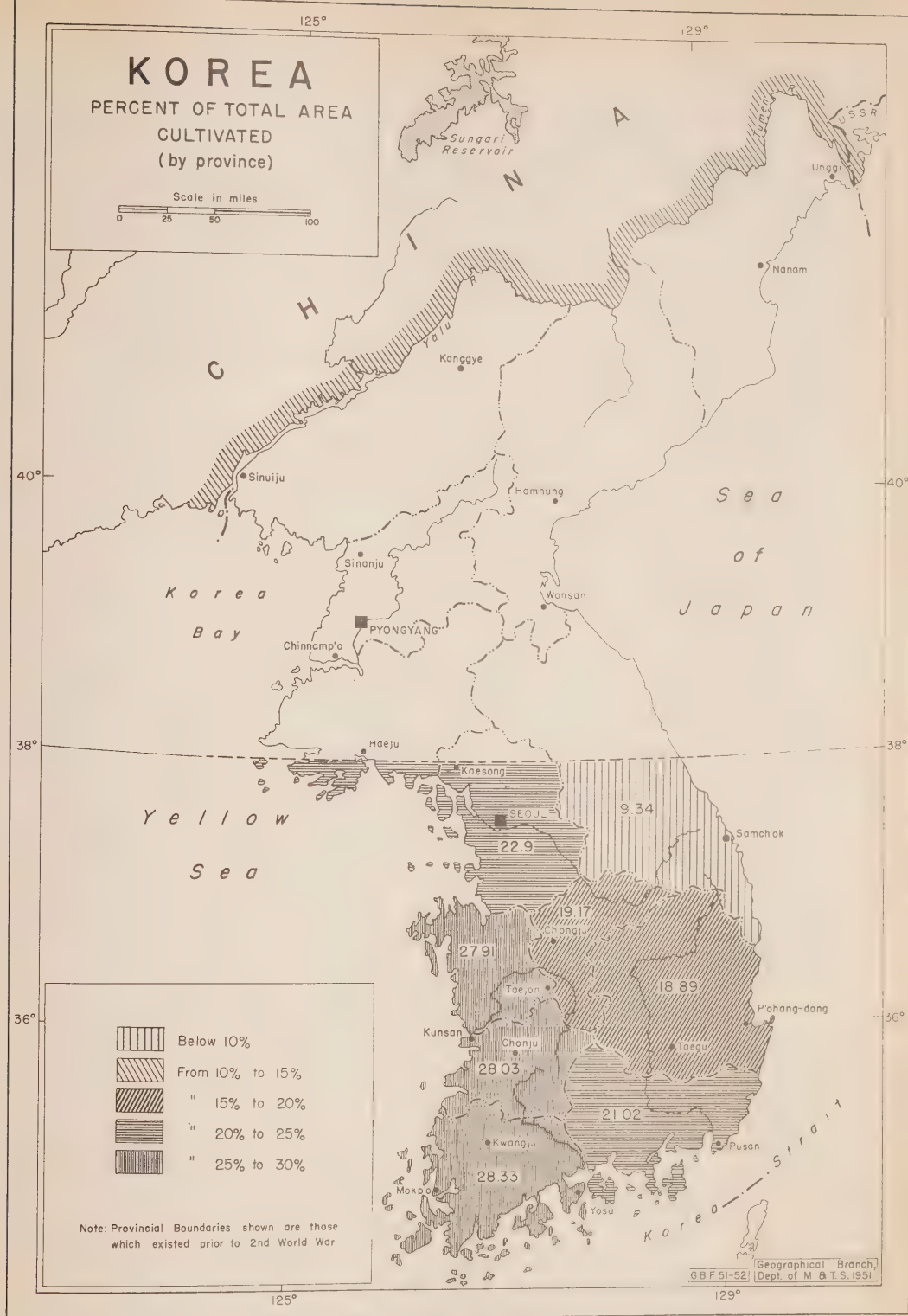


Fig.8

1. Land Policy: Since the end of the war a policy of land reform has been instituted. The first step in South Korea was to sell land formerly held by the Japanese to Koreans. By August, 1948, 85% of the 658,400 acres affected had been redistributed. The policy of the Occupation Forces was that the land should be sold for kind rather than cash and that terms should be as reasonable as possible. There still remains the larger problem of land held by absentee landlords: a problem made all the more real by the fact that such landholdings in North Korea have been broken up and redistributed. In May, 1949, a land reform bill passed the South Korean Legislature which laid down a policy for redistributing land held by Koreans similar to that affecting Japanese lands.

In North Korea, Russian occupation authorities, working through Koreans, have set up a policy of land redistribution. Prior to 1939 there were 1,000,000 landless farmers in North Korea. By 1947 it was reported that 725,000 of these landless farmers had received an average of 3.4 acres of land per farmer. The system of land redistribution in North Korea is very complicated with the real power apparently resting in the hands of Provincial Peoples' Committees. It is apparent, however, that considerable progress has been made in land reform throughout North Korea. Table 3 shows the extent of tenancy in pre-war Korea.

Table No. 3 - Tenancy in Pre-War Korea: ¹

Category	Number	Area Owned (1,000s of Acres)	% of No.	% of Area
Landlords	83,000	7,198	2.7	63.9
Owner-farmers	503,320	2,888	16.3	25.7
Owner-tenants (a)	729,320	1,174	23.6	10.4
Tenants	1,583,435	0	51.3	.0
Kandemins (b)	71,187	0	2.3	.0
Labourers	116,020	0	3.8	.0
	<u>3,985,282</u>	<u>11,260</u>		

(a) Persons who work both land they own and land they lease.

(b) Kandemin is a Japanese term for persons, usually squatters, who clear the land by fire.

¹ Grajdanzev, A.J. cited in McCune, Shannon, Land Distribution in Korea, Far Eastern Survey, Vol. XVII, No. 2, January 28, 1948, p. 15.

2. Crops: Rice is the dominant crop in Korean agriculture. It occupies one third of the cultivated land and is almost all grown by means of irrigation. The Korean farmer attempts to grow rice wherever he lives. Consequently, rice is found growing as far north as climate will permit. However, the southwest has the greatest rice acreage. (Fig. 9). Here a long growing season and a heavy precipitation provide an ideal regime for rice. Prior to the war rice was grown as a cash crop for export to Japan. Table 4 shows the crops acreage of Korea.

Table No. 4 - Crop Acreage in Korea (1,000 Acres)

	Korea (Pre-War)	South Korea	
		1947	1948
Paddy Rice	4,025.35	2,751.58	2,805.92
Dry Rice	68.11	--	--
Barley	2,200.10	1,548.69	1,541.28
Rye	242.55	103.62	93.86
Wheat	791.35	217.36	269.23
Oats	286.40	2.47	7.41
Millet	2,163.35	--	--
Barnyard Millet	268.03	--	--
True Millet	42.14	--	--
Corn	228.83	54.34	91.39
Buckwheat	257.25	--	--
Sweet Potatoes	27.20	--	--
Potatoes	182.52	108.56	103.62
Soya Beans	198.21	80.00	--
Peanuts	1.47	--	--
Vegetables	161.70	--	--
Cotton	460.40	395.20	419.97
Mulberry	164.15	--	--
Tobacco	34.86	39.52	39.52
Hemp	64.22	24.70	52.87
Flax	--	64.22	--
Beans	--	71.63	103.74
	<u>11,868.19</u>	<u>5,461.89</u>	<u>5,528.81</u>

(-- Data not available.)

Source: - compiled.

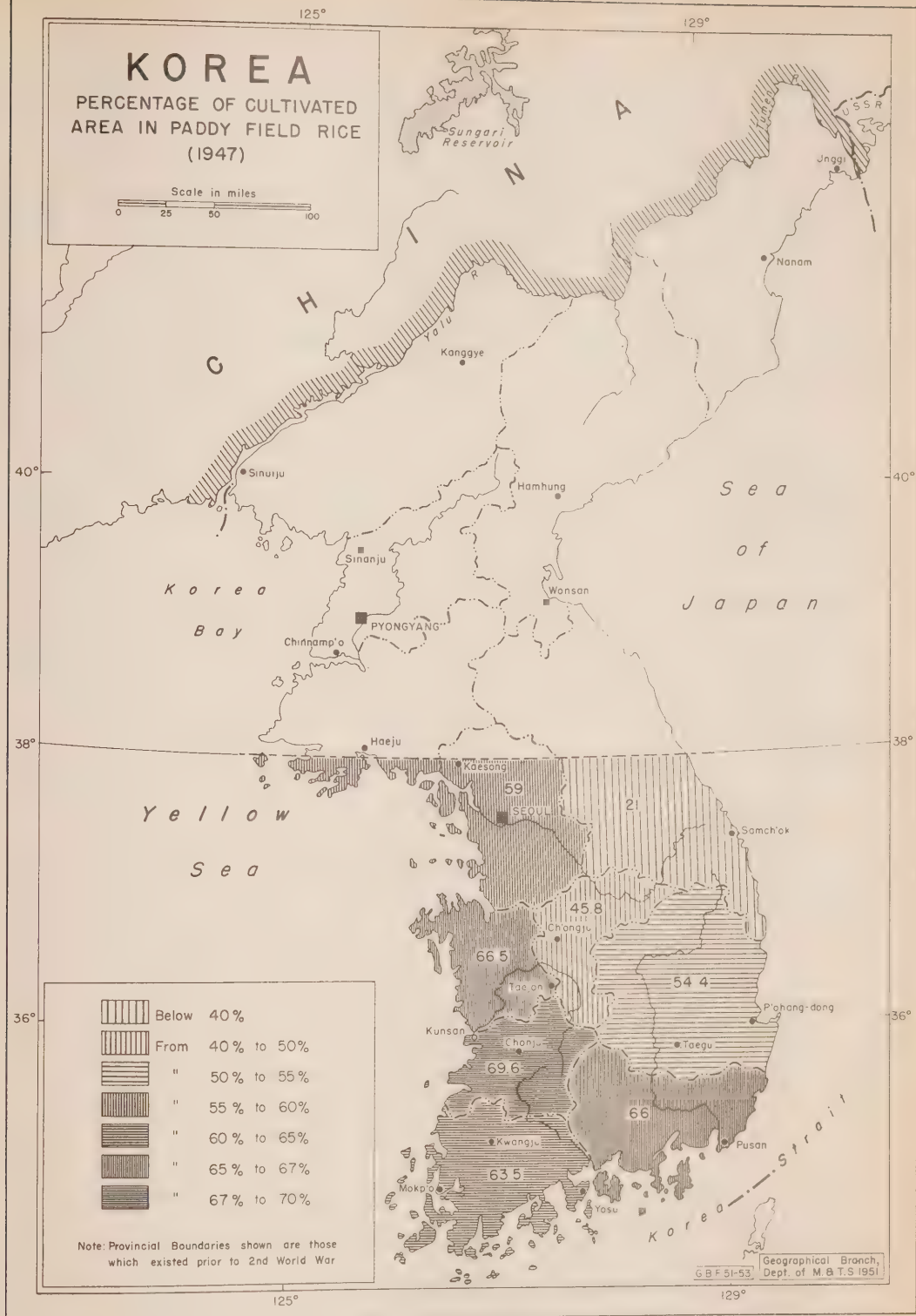


Fig. 9

Barley is the second crop in Korea and occupies three fifths the acreage of rice. In the south it is grown as a winter crop following rice in a double cropping system, while in the north it is a spring crop in a single cropping system. It is grown principally for home consumption.

Millet is grown throughout Korea but is most important on the plain around Korea Bay on the northwest coast with a lesser second concentration in the northeast.

Wheat is a relatively minor crop with the heaviest concentration in Hwanghae Do Province in North Korea, where a gently rolling landscape permits good drainage and a warm summer season facilitates the ripening of this crop. Other crops grown include soya bean, radish, oats, potatoes, tobacco, ginseng and mulberry.

The production of agricultural raw materials is still far less important than that of food crops (i.e., about 5% of total production) but it is on the increase. Cotton is the principal fibre crop of the peninsula. American varieties were introduced experimentally at Mokpo in 1906 and have since proven so superior to native varieties that they have almost wholly supplanted them.

Fish-farming is another characteristic farming practice in Korea as in other parts of the Orient. Here fish are raised as a crop in small ponds or tanks upon the farm.

Stock raising is of minor importance. The small acreage per farm requires the intensive garden-like farming of crops to support the family. There is little opportunity for an economic practice like cattle-grazing which involves a more extensive basis of operation. However, few farms

are without some animals, usually pigs, oxen, and/or chickens. The cattle are used as work animals and are sold after a year or two as beef.

Table 5 gives the production of the major crops in Korea as a whole until 1944 and of South Korea since 1945.

Table No. 5 - Crop Production in Korea (Thousands of Metric Tons)

<u>Year</u>	<u>Barley</u>	<u>Rice</u>	<u>Soya Bean</u>	<u>Tobacco</u>	<u>Cottonseed</u>
1934-38 Average	1,162	3,894	518	22.9	76.5
1941	1,268	3,994	356		
1944	1,269	3,473	356		
1946 (b)	592	2,380	131	8.3	38.4
1947	547	2,570	122	19.7	28.1

(b) 1946 and 1947 figures are for South Korea only.

3. Agricultural Regions: Agricultural practices vary throughout Korea as a result of climatic differences and the availability of good arable land. It is possible to recognize, however, four agricultural regions within the country. (Fig. 10).

(a) North and Central Interior. This region includes the mountainous areas of north and central Korea. Agriculture is restricted to the valleys and the lower slopes. Farmers live on isolated farms rather than in villages as in the rest of Korea. Fast maturing varieties of rice are grown in the valley bottoms but millet and barley are the most important of the cereal crops. Soya beans, hemp, oats and potatoes are also grown. Agriculture in this region is handicapped by a short growing season and a cold winter which prevents double-cropping.

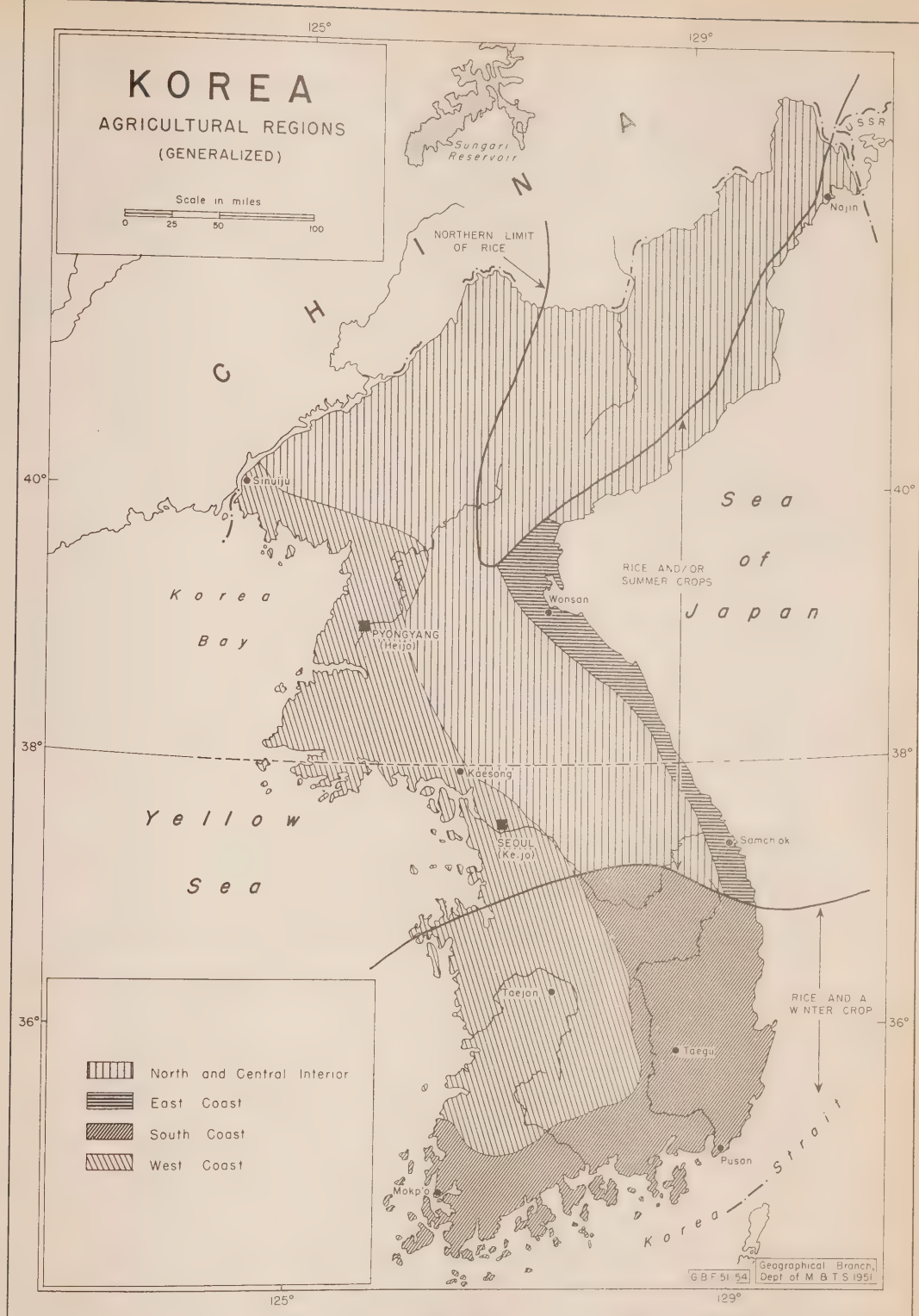


Fig. 10

A particularly wasteful type of farming known as fire-field agriculture is common in this region. Hillsides are burned before crops are planted. This serves the dual purpose of clearing the land as well as fertilizing it. After the field has been cultivated for a few years and its fertility greatly reduced, it is abandoned and the farmer burns over another area. During the period of Japanese rule efforts were made to curtail this practice.

(b) East Coast. Only a limited amount of suitable farmland occurs along the east coast. Farm villages are usually located along the contact line between the plains and hills. This facilitates cultivation of both the lowland and the foothills. Rice is the dominant crop on the plains whereas barley, millet, sorghum and mulberry are grown on the higher land. Towards the south, potatoes, beans and fruits begin to take on local importance. Here also the growing season is only long enough to permit one crop annually.

(c) South Coast. Rice and mulberry are the dominant crops of the south. Soya bean, American cotton and sweet potatoes are also grown. Peas are a specialty around Mok^{po}. Double cropping is possible throughout the region with barley the dominant winter crop.

(d) West Coast. The west coast is the most important agricultural area in Korea. It consists of a series of basins of varying sizes. Agricultural practices vary from north to south with a transition from one to two crops a year occurring south of Seoul.

The division of Korea has left the south with the bulk of the rice and barley acreage while the north has now most of the wheat and millet acreage. Soya beans and mulberry are fairly well distributed between the

two areas. It would appear that South Korea has a better agricultural future than has the North since it has a larger acreage of cultivated land and a climate that will permit double-cropping throughout most of the area. North Korean sources claim an increase of 15.6% in crop acreage since 1945. The extent of this increase in acres is unknown as a base figure was not quoted. Nevertheless, the south is dependent on imported fertilizer, principally from North Korea. This interdependence cannot be overlooked.

Fisheries

The long, indented coastline, the many small off-shore islands and an abundance of fish food in the coastal waters have provided Korea with a natural environment suitable for the development of a fishing industry. The country is located at the edge of one of the four major fishing regions of the world. Prior to the establishment of the Japanese regime Korean fishing methods were primitive. After 1912 the Japanese introduced regulations governing methods, tackle, seasons and open areas. In addition, they established schools and experimental stations and improved harbour and market facilities. By 1939 Korea ranked sixth in the world as a producer of fish products, (i.e., about 15% of world production).

Fishing is of major importance along the east coast where arable land is limited. On the other hand, the western side of the peninsula is predominantly agricultural with fewer people being attracted to the sea. Native Korean fishermen usually live in small villages, many of which dot the harbours and bays of the east coast. Under Japanese direction the fishing industry began to concentrate in larger ports with a resultant decline in the importance of small fishing villages.

The important catches by value include, sardine, mackerel, anchovy, sciaena and herring. These fish are used either for fertilizer or are processed in modern canneries for export.

Many of the best fishing grounds are found north of the 38th parallel although enough occur south of the dividing line to make fishing an important industry in both sections of the peninsula. At present the re-establishment of the industry in South Korea is hindered by a lack of equipment, both for catch and for processing.

Forestry

Forestry is important only in the mountains of North Korea, where the only remaining stands of good timber occur. The forest industry was controlled by the government under the Japanese regime.

Timber is cut in the mountains and is either floated down the Yalu and Tumen rivers or is shipped out by rail. Pulp and paper mills are located at the mouth of the Yalu River. These mills were operated by Japanese and Chinese prior to the end of the war.

Throughout the rest of Korea reforestation was one of the major aims of the pre-war government.

Mining

The distribution of Korean mineral deposits has already been outlined in Chapter I. Some 79% of the iron mines and over 70% of the coal mines, the basis of heavy industry, are found in North Korea.

Approximately one half of Korea's coal production was anthracite. This production reached a peak of 4,500,000 metric tons in 1944. Total

coal production jumped from 2,282,000 metric tons in 1936 to 7,619,000 metric tons in 1941. The total coal production of South Korea in 1948 equalled about 10% of the 1941 production of the entire peninsula.

Iron ore production attained a peak of 3,387,000 metric tons in 1944. This was three times the 1941 figure. North Korea produced 96.7% of this total. No post-war production figures are available but such production as there is will be nearly all in North Korea.

During the war Korea was the world's leading producer of graphite with a peak production of over 100,000 metric tons in 1944.

No estimate has yet been made of the effect that the greatly expanded wartime production has had on the future of the mining industry in Korea. It is possible that much of the higher grade and easily accessible ores have been mined and that Korea has been left with somewhat depleted reserves. Metallic deposits suffered the heaviest exploitation.

Mineral production reached a peak during the final years of the war, except for gold and silver. These two metals reached their peak production immediately prior to the war when Japan was striving to build up its reserves of foreign exchange. Gold production jumped from 199,483 ounces in 1930 to over 800,000 in 1937. By 1943 production had declined to less than 500,000 ounces although in the following year over 650,000 ounces were produced.

Table 6 shows the production of various minerals in Korea. After 1946 it has been possible to obtain data only for South Korea. Table 7 shows how the mineral production of the peninsula was divided between North and South in 1944.

Table 6 - Mineral Production in Korea (in Metric Tons) ¹

<u>Year</u>	<u>Coal (All)</u>	<u>Anthracite</u>	<u>Iron Ore</u>	<u>Copper</u> (metal)	<u>Tungsten</u> (concentrate)
1939(c)	4,481,000	2,233,864	-	-	3,969
1940	-	-	1,072,000	3,206	4,525
1941	7,619,000	-	1,691,000	3,806	4,650
1942	-	3,898,282	2,278,000	4,330	6,062
1943	-	-	2,359,000	4,554	6,932
1944	-	4,530,262	3,387,000	5,192	8,402
1945	-	601,000(d)	-	1,251(d)	1,234(d)
1946(e)	266,000	134,000	-	522	313
1947	500,208	463,153	-	384	1,022
1948	867,425	799,385	-	66	1,178

<u>Year</u>	<u>Lead</u>	<u>Magnesium</u>	<u>Mica</u>	<u>Molybdenum</u>	<u>Graphite</u>
1938	-	-	-	54	57,318
1939	7,957	49	-	54	83,415
1940	7,630	260	80	96	94,273
1941	10,000	263	90	96	68,640
1942	11,900	210	111	96	96,054
1943	18,467	532	146	180	96,471
1944	21,200	1,628	422	270	103,306
1945	2,096(d)	1,014	-	24	8,422(d)
1946(e)	-	-	-	-	-
1947	-	-	-	5	-
1948	-	-	-	2	15,454

<u>Year</u>	<u>Gold</u> (ounces)	<u>Silver</u> (ounces)	<u>Manganese</u>
1942	759,584	3,088,947	-
1943	490,009	2,829,265	-
1944	656,678	2,557,525	32,377
1945	9,581(d)	-	-
1946	-	27,553(d)	-

(c) - data not available or not listed in sources

(d) - South Korea only

(e) - after 1945 South Korea only

¹ Compiled from Minerals Yearbook 1946. Statistical Yearbook and Mineral Trade Notes 1949, Mineral Resources of South Korea, 1948.

Table 7 - Mineral Production - North and South Korea

Mineral	NORTHERN KOREA				SOUTHERN KOREA			
	Mines No.	%	1944 Production (metric tons)	% of Total	Mines No.	%	1944 Production (metric tons)	% of Total
Alumina shale	3	100	-	-	-	-	-	-
Alunite	-	-	-	-	-	-	12,000	100
Antimony	3	75	-	-	1	25	-	-
Apatite	2	100	37,692	100	-	-	-	-
Asbestos	4	80	100	100	1	20	-	-
Chrysotile	5	20	220	5	20	80	4,117	95
Mtn. Leather	14	50	95	25	14	50	283	75
Barite	4	80	5,079	100	1	20	-	-
Beryl	9	45	20,000	34	11	55	40,000	66
Brucite	1	100	2,002	100	-	-	-	-
Chromite	2	100	-	-	-	-	-	-
Coal	67	77	6,062,408	79	20	23	1,556,458	21
-Anthracite	24	66	3,240,749	68	12	34	1,526,513	32
- Lignite	43	84	2,821,659	99	8	16	29,945	1
Cobalt	2	18	-	-	9	82	6	100
Columbite	3	75	2	91	1	25	-	9
Copper	13	35	1,895	45	24	65	2,302	55
Feldspar	2	66	-	-	1	34	-	-
Fluorite	45	66	69,000	53	23	34	61,000	47
Gold	39	49	13	63	40	51	7	37
Graphite	147	81	57,396	56	35	19	45,598	44
Ilmenite	1	50	235	95	1	50	13	5
Infusorial								
Earth	5	50	3,712	32	5	50	7,818	68
Iron Ore	19	79	3,221,057	97	5	21	110,757	3
Lead	45	60	11,277	57	30	40	8,386	43
Limestone	24	92	822,148	98	2	8	15,128	2
Lithium Ore	5	56	34	4	4	44	730	96
Magnesite	7	100	388,187	100	-	-	-	-
Manganese	4	50	-	-	4	50	32,377	100
Mica								
(Phlogopite)	27	63	405	90	16	37	44	10
Molybdenite	5	22	84	14	18	78	521	86
Nickel	7	58	440	71	5	42	181	29
Oyrite	8	89	246,002	100	1	11	-	-
Pyrophyllite	3	10	1,200	3	27	90	40,011	97
Sassolite	2	100	4,786	100	-	-	-	-
Silica	6	40	-	-	9	60	-	-
Talc	4	66	-	-	2	34	-	-
Tungsten	20	46	5,292	46	23	54	6,217	54
Zircon	3	34	-	-	6	66	-	-
Zinc	15	60	11,326	75	10	40	3,788	25
TOTAL	642	62	10,972,087	85	339	38	1,947,742	15

Source: Mineral Industry of Korea in 1944. Report 35, Natural Resources Section, G.H.C., S.C.A.P., 1946, p. 19.

Power

Coal is the leading source of power in Korea. It is used either directly as coal or is converted to thermal electricity. In 1937, coal supplied 84.5% of the energy used in industry whereas oil supplied 8.9% and hydro-electricity 6.6%.¹ In the same year coal supplied 75% of the energy used in transportation.

Hydro-electric power has been developed along the Tumen, Fusen as well as along the Yalu and its tributaries. Other power projects have been developed near Chongp'yong and along the Sum Jin River. In 1944, Korea had an established horse-power of 510,000. In 1947, it was estimated that South Korea had 147,000 horse-power available.

South Korea relies very largely on North Korea for its power. Since May, 1948, no power has been exported from the North to the South, hence South Korea has suffered a power shortage. Plans have been made to increase the electric power of South Korea by the construction of a thermal unit near Samch'ok, by completing an unfinished dam on the Sum Jin River and by carrying out extensive repairs to existing plants.

There are no significant local supplies of petroleum or natural gas in Korea.

Industries

The division of Korea left the bulk of industrial power in the North. Indeed, North Korea was left better off from the standpoint of minerals, coal, water power, and fertilizer production and established industries, but it lacked an iron and steel mill. Seoul, in South Korea,

¹ U.S. Department of State, "Energy Resources of the World", U.S. Government Printing Office, Washington, D.C. 1949, p. 96.

had the only iron and steel industry in the country. After the partition of the peninsula this industry operated on a much reduced scale and relied chiefly on imported raw materials. Prior to the establishment of an iron and steel industry in North Korea it seems highly possible that indigenous raw materials will be shipped northward to Manchuria to feed the large iron and steel mills at Anshan and Fenhshih. Nevertheless, throughout the North heavy industry predominates whereas in the South the production of consumer goods is important.

Prior to 1910 industrialization was practically non-existent in Korea. Under the impetus of the Japanese and the favourable conditions for industrial development which prevailed in Asia during the First World War, Korea began to develop these latent possibilities. The extent of this growth is shown in Table 8.

Table 8 - Industrial Growth in Korea

<u>Year</u>	<u>Plants</u>	<u>Employees</u>
1910	150	8,200
1935	5,000	160,000
1944	9,323	---

The basis of most Korean industry is the small workshop. In this regard Korean industry parallels that of China. As will be seen from Table 8, the average number of employees per plant was just over 30. In Canada the average number of employees per plant is 43 and in Ontario it is 53.

SOUTH KOREA

South Korea had 3,746 industrial establishments in 1947. These plants were engaged in the production of textiles, rubber products, paper, hardware, pottery and glass, oils and fats, soap, carbides and processed foods. Production is not sufficient to meet the demands of the home market. Many of the plants, subsidized by the Japanese, are uneconomic to operate.

Industrial recovery in South Korea was hampered by the loss of Japanese technicians, lack of repairs, shortage of raw materials and a shortage of electrical power.

The principal industries, pre-war, on a value basis were as follows:

Textiles	Sake and wine
Paper	Fertilizer
Cement	Hardware
Sugar	Leather
Ceramics	Matting and slippers.

Seoul is the industrial centre of South Korea being the only large industrial concentration below the 38th parallel. Along the south coast and in the vicinity of Samchok some industrial development has occurred in the towns, with Pusan being the most important of these.

NORTH KOREA

There has been considerable progress made since 1945 in rebuilding the industrial machine of North Korea with the U.S.S.R. supplying equipment and technical assistance. Industrial output has increased nearly four times since 1945 but the actual volume of production is unknown. North Korean sources give the figures shown in Table 9 as an indication of recent industrial development. While the figures are expressed in terms of a base of 100, no value has been placed upon the base output. However, these figures indicate the relative progress being made in rehabilitating and expanding North Korean industry.

Table 9 - Industrial Progress in North Korea

<u>Year</u>	<u>Percentage Production</u>
1946	100.
1947	189.3
1948	263.3
1949	377.1

Fig. 11 shows the general location of industrial regions in Korea and Fig. 12 shows the location of specific industries within the country.

Heavy industry is concentrated in the Hamhung - Wonsan and Pyongyang regions. In northeastern Korea industry is characterized by oil refineries, aluminum plants and hydro-electric installations.

Transportation

The transportation system of Korea is a development of this century (Fig. 13). Previously, the regions of Korea, being more or less self-subsistent, did not need an extended system of roads. Rivers and coasts carried the bulk of what trade there was. The rise of land transportation was largely stimulated by the Japanese. The first railroad in Korea was built in 1900 when a short line was constructed linking Seoul with Inchon on the coast. In 1905 Seoul and Pusan on the southeast coast were linked by rail. As a result of the Russo-Japanese War (1904-05) a rail line was constructed from Seoul to Sinuijui near the mouth of the Yalu River. This line was opened to the public in 1906.

In the period 1906 to 1920 three major rail lines and one important bridge were added to the railway system of Korea. Lines linking Taejon and Mokpo, Seoul and Wonsan, and Pyongyang and Chinampo were constructed. In 1911 the Korean and Manchurian railway systems were connected when a bridge was built to span the Yalu River north of Sinuijui.

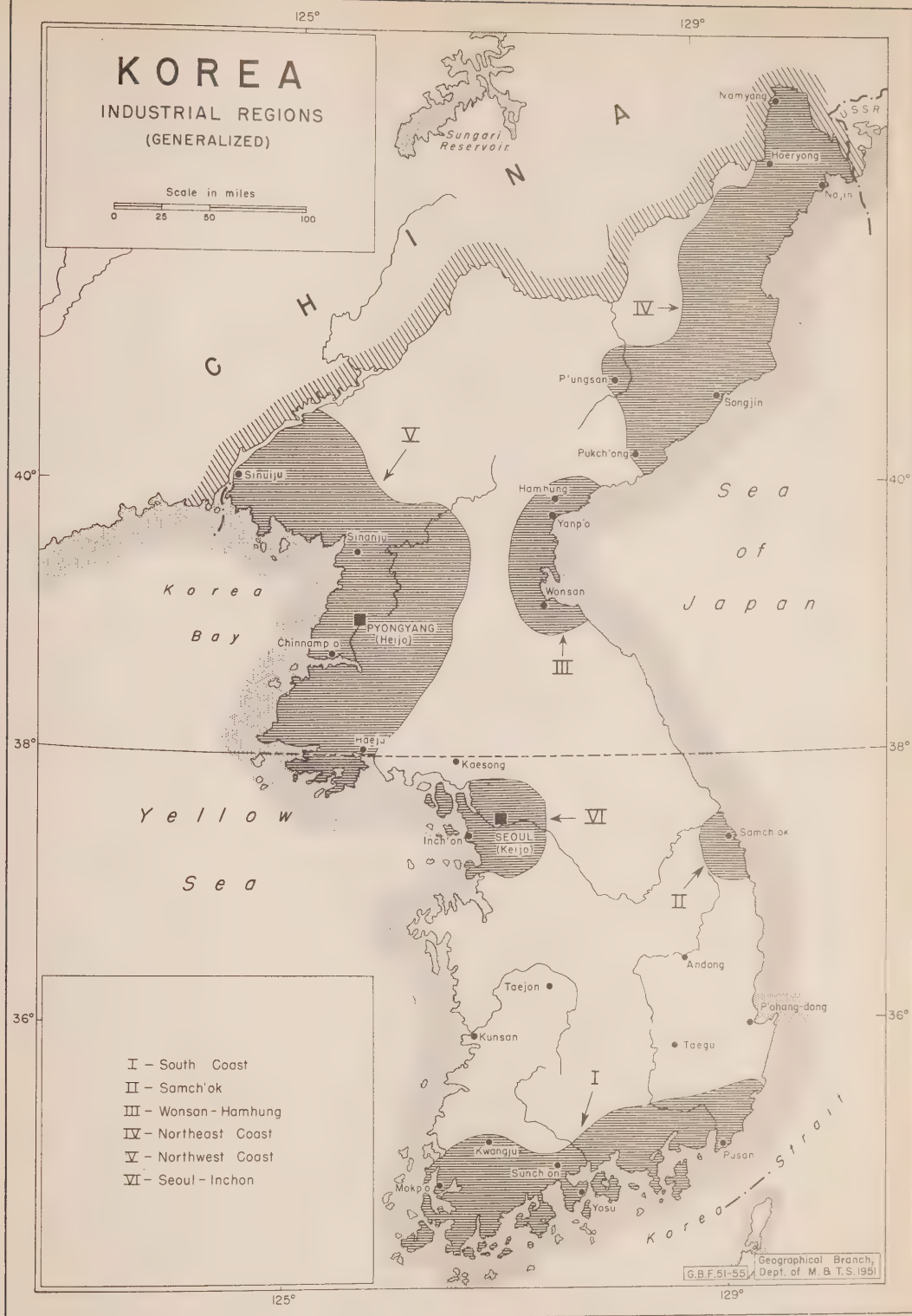
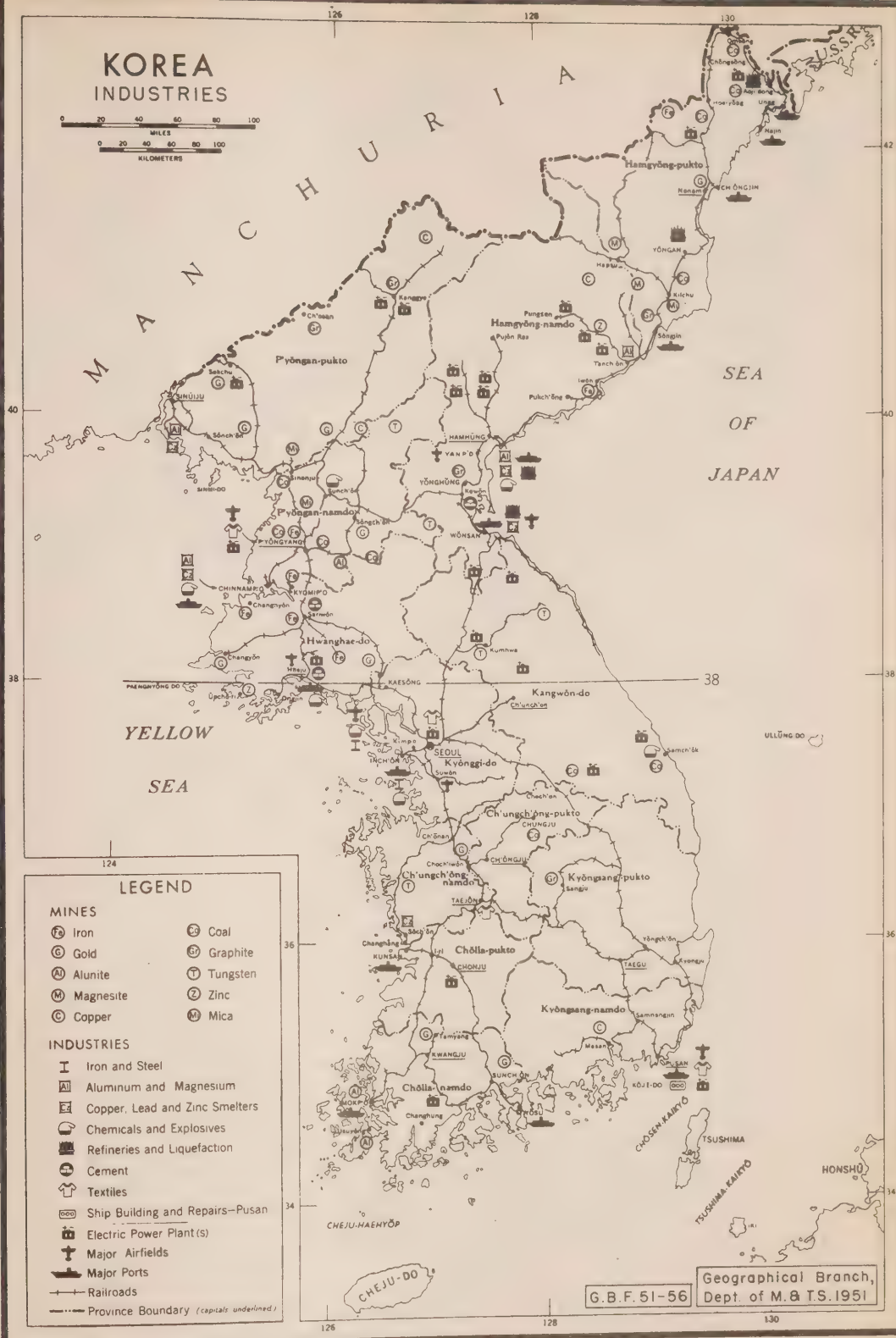


Fig. II

KOREA INDUSTRIES



LEGEND

MINES

- | | |
|---------------|---------------|
| (Fe) Iron | (C) Coal |
| (G) Gold | (Gr) Graphite |
| (Al) Alunite | (T) Tungsten |
| (M) Magnesite | (Z) Zinc |
| (Cu) Copper | (Mi) Mica |

INDUSTRIES

- [I] Iron and Steel
- [A] Aluminum and Magnesium
- [S] Copper, Lead and Zinc Smelters
- [CE] Chemicals and Explosives
- [RL] Refineries and Liquefaction
- [C] Cement
- [T] Textiles
- [SB] Ship Building and Repairs—Pusan
- [EP] Electric Power Plant(s)
- [MA] Major Airfields
- [MP] Major Ports
- [R] Railroads
- Province Boundary (capitals underlined)

G.B.F. 51-56

Geographical Branch,
Dept. of M. & T.S. 1951

(After U.S. Dept. of State Publication 3305, 1948)

Fig.12

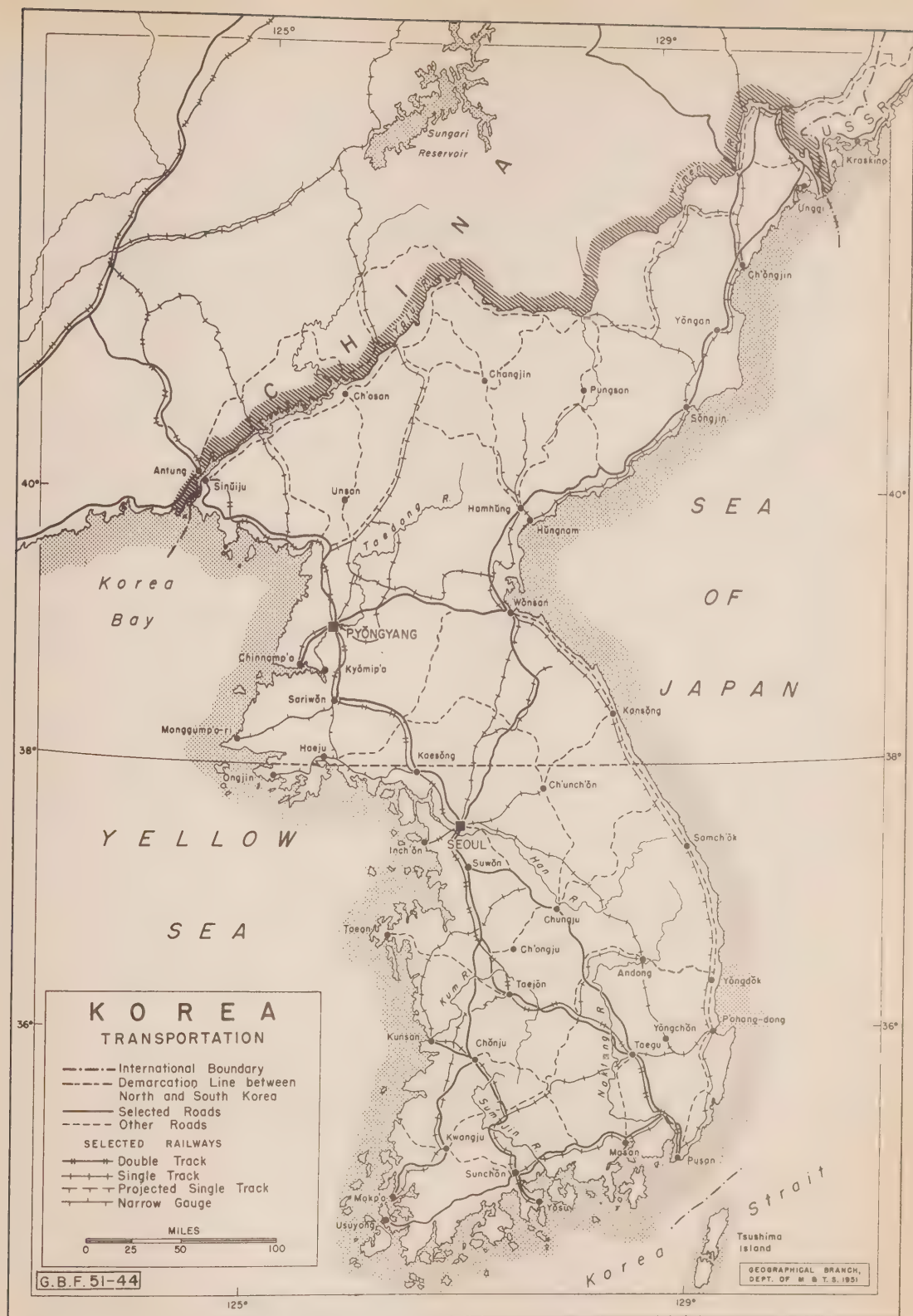


Fig. 13

Between 1920 and 1940 the main emphasis in railway construction in Korea was placed on linking northern ports with Manchuria. This phase of construction received added impetus after the Japanese occupation of Manchuria in 1933. Military considerations and the desire to provide speedy transportation of goods between Manchuria and the Japanese mainland provided the motivating factors in northern railway construction.

The routes of Korean railways have been dictated by physiography. Of the two main north-south lines in northern Korea one follows the depression from Seoul to Wonsan, and north along the coast while the line from Seoul to Pyongyang and Sinuiju follows the coastal plain. To the south Seoul is linked with Mokpo and Yosu via the western plain and to Pusan via Taegu. East-west lines follow the valleys of westward flowing rivers. With the exception of the Sinuiju-Seoul-Pusan line all railways in Korea are single tracked.

Railways in Korea have been partly under state ownership and partly under private control. As a rule the government controlled all main lines. The Korean railway system was linked to that of Japan proper by means of ferry boats which made two trips daily between Pusan and Shimonoseki.

Table 10, shows the growth of Korean railroads from 1911 to 1940.

Table 10 - Growth of Korean Railroads (Miles)

<u>Year</u>	<u>State Railways</u>	<u>Private Railways</u>	<u>Total</u>
1911	674	---- (a)	
1920	1,159	---- (a)	
1925	1,309	---- (a)	
1930	1,735	---- (a)	
1935	2,106	678	2,784
1940	2,919	1,234	4,153

(a) Data not available.

Compiled from various sources.

In 1948 South Korea had 1,676 miles of usable railway trackage. While no comparable post-war figure exists, for North Korea the 1940 trackage totalled 2,500 miles.

The Korean road system, following the same general pattern as the railroads, has not developed as much as the railway system. In 1939 there were 17,330 miles of road (all types). The main primary road of the peninsula runs from the borders of Manchuria at Sinuijui in the northwest, southward along the western plains to Seoul where it forks southwest to Mokpo and southeast to the Pusan-Masan area. These southward extensions are linked by a relatively important lateral route from Taejon to Taegu.

The only other primary route of vital importance extends northeastward from Seoul, through the defile of the Seoul-Wonsan corridor, thence along the northeast coast to the borders of the U.S.S.R. where it links up with routes leading to Vladivostok. A lateral route links the east and west coasts of North Korea from Wonsan to Pyongyang. Everywhere else routeways are secondary.

Very little is known regarding the use of Korean roads by trucking firms, although it is generally thought that railroads conduct the major freight hauls of the peninsula. Bus lines follow the primary roads.

Prior to 1945 Korea was linked with Japan and Manchuria by air. Regular scheduled airline services started operating in Korea on April 1, 1929, with scheduled flights from Tokyo to Diaren via Korea. Airports were constructed at Pusan, Seoul (Kimp'o Airfield), Pyongyang and Sinuijui. The last-mentioned airfield has been in use since 1931. From Sinuijui regular flights were scheduled to various parts of Manchuria. At present other airfields are located at Taejon and Suwon in South Korea, and at Wonsan, Yampo and Hamhung in North Korea.

The latest United Nations statistics list no merchant shipping fleet registered in Korea. However, in 1935 Japanese sources listed a total of 320 steamers with a tonnage of 58,588 tons registered in the country. These vessels were owned by Japanese shipping firms. It is likely that this shipping was destroyed during the Second World War, or has since been transferred to Japanese registration.

Foreign Trade

The foreign trade of Korea has never been very extensive, but it has been quite significant in the national economy. It has been mainly concerned with the export of food products and raw materials to its Asiatic neighbours and the import of consumer goods Fig. 14. During the time the country was part of the Japanese Empire four-fifths of its trade was with Japan proper. (Table 11). Since the Second World War the foreign trade of South Korea has been largely with the United States. In addition, there has been extensive importation of Asiatic goods purchased with American aid. Private trade has been allowed since 1947 and this has been primarily with Hong Kong and Macao. Private trade with the United States has been small. There is a certain amount of 'illegal trade', with North Korea, China, Japan, and Manchuria, but the amount of this trade is unknown. It is likely that the trade of North Korea has been with China, Manchuria, and the Soviet Union although the extent of this trade has not been publicized. The present trade of South Korea is largely on a government to government basis.

FOREIGN TRADE COMMODITIES

- BY VALUE -

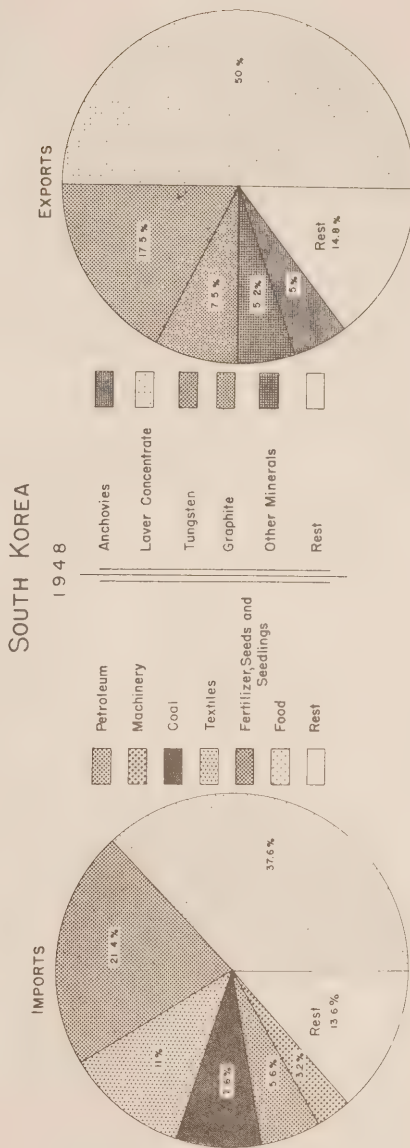
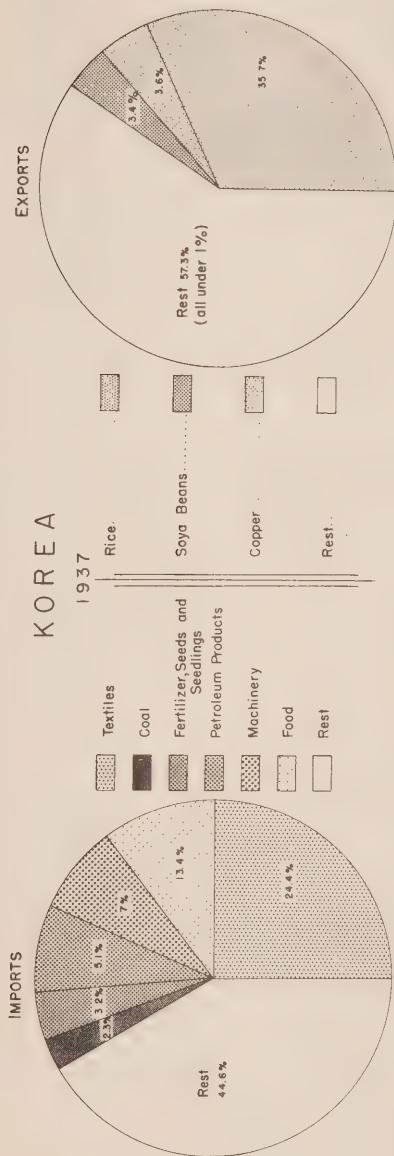


Table 11 - Percentage of Exports and Imports to and from Japan by Value.¹

<u>Year</u>	<u>Exports</u>	<u>Imports</u>
1935	88%	85%
1930	90%	82%
1925	92%	69%
1920	85%	57%

One characteristic of the pre-war foreign trade of Korea was a constant excess of imports over exports. A similar trend is apparent in the present trade of South Korea where imports double the value of exports. Foreign trade by type is shown in Table 12.

Table 12 - Export Products and Import Requirements of South Korea.

<u>Exports</u>	<u>Imports</u>
Tungsten Ore	Foodstuffs
Graphite	Industrial raw materials
Marine products	Coal
Red ginseng	Fertilizer
	Petroleum Products
	Paper, Salt, Tools.

Prior to the war rice constituted Korea's most valuable export. In 1937 it accounted for 35.7% of the total value of exports. Only soya bean (3.4%) and copper concentrates (3.6%) were valued at more than 1% of total export. Pre-war Korean imports were dominated by textiles and manufactures (24.4%) and foodstuffs (13.4%). Significant quantities of machinery, petroleum products, fertilizers, and coal were also imported.

¹ Based on figures appearing in "Annual Report of the Administration of Chosen, 1935-36, p. 71.

Since 1948 it has not been possible to obtain foreign trade figures for all Korea. However, South Korea's exports have been dominated by mineral concentrates accounting for 61.8% by value in 1947 and 80.2% in 1948. Foodstuffs other than those produced in the country make up the major item of South Korea. Fertilizers and textiles are other important import commodities.

North Korean external trade has been mostly with the U.S.S.R. On March 17, 1949, the U.S.S.R. and North Korea signed an economic and cultural agreement which called for large scale co-operation between the two countries. The agreement is to be effective for ten years.

During 1949 the following products were imported by North Korea from the U.S.S.R.; coke, oil, factory and plant equipment, electrical equipment and agricultural machinery. No information is available concerning North Korean exports to the U.S.S.R. or in whose favour the balance of trade lay.

Summary

It can thus be seen that the Korean Peninsula, cut off from the main stream of continental migration by high mountains, has developed as a more or less homogeneous region, significantly different from its neighbours. Developed as a unit its economy shows the high integration and interdependence of its northern and southern areas.

With the collapse of the Japanese Empire the division of Korea into zones of occupation was completely artificial both in terms of the peninsula's physical and social geography. If a physical division is to be regarded at all it should most logically lie along the Wonsan-Seoul

corridor. However, in terms of settlement and transportation this corridor is vital to both the northern and southern areas of the peninsula.

A unified Korea could play a useful role as an independent nation in the Far East. However, a united Korea will still be obliged to engage in considerable social and economic intercourse with its neighbours due to its juxtaposition between them and the stage of its aesthetic and material culture.

CHAPTER IV

POLITICAL GEOGRAPHYThe General Setting

Much of the Korean Peninsula's importance, both historically and today can be attributed to its Far Eastern situation. As pointed out it has played the role of a buffer state between China, Japan and Russia and continues to do so. Control of Korea by Japan gave that country a base for economic and political operations on the Asiatic mainland; it also prevented a large power becoming established a short distance from the Japanese homeland. On the other hand, control of Korea by China or the U.S.S.R. would have blocked Japanese moves on the continent and prevented Japan from developing its "co-prosperity sphere" with the mainland. Thus as a result of its geographical position and its relative smallness compared to its neighbours in terms of land and population Korea became a pawn in the power politics of the Far East. Since the 15th Century Korea has either maintained an uneasy independence or has been under direct political control of one of its more powerful neighbours. (Fig. 15).

In spite of difficult political fortunes, Korea has maintained a separate nationality. The mountainous northern frontier prevented large scale immigration from its continental hinterland. The sea on three sides helped to insulate it from the Pacific. Thus its people have formed a unique cultural and economic group resisting most foreign influences. Koreans are essentially a homogenous people with common traditions, language and religions.

Although the principal developed areas are in the west, facing away from Japan, access to them has been much easier by sea from Japan than by land from China or the U.S.S.R. Moreover, the nature of Korean



Fig.15

raw materials and products is such as will continue to attract a Japan seeking food for a rapidly expanding population and a re-established industry. The interests of China and Russia, and latterly the U.S.S.R., in the peninsula have been chiefly strategic. Those nations require little from Korea and export little to it.

The pre-war economy of Korea was so closely integrated with Japan that domestic needs received little consideration. The needs of Japan, rather than the needs of Korea, were the governing factors in such exploitation. Thus Korea in post-war years has had to face the problems of re-orientation from a position within the economy of the Japanese Empire to one trying to serve the needs of a small country in a difficult world situation. These problems have, nevertheless, been further complicated by a rapidly expanding population. Korea is relatively well supplied with minerals and power; the Japanese laid the basis of heavy industry and in pre-war years the country was an exporter of food products. Given a sufficient period of peaceful development Korea could become a relatively viable nation and help to stabilize the whole position between the three great powers of the Far East.

Sketch of the Changing Political Geography

Korean history records a continual procession of invaders. The Tartars, the Chinese, the Mongols, the Manchus and the Japanese all entered by force of arms. The Manchus and the Japanese were the chief neighbours vying for a Korean sphere of influence. As a result of these continued invasions the Koreans decided, during the 17th Century, that isolation would provide their only safeguard. From then until the late 19th Century Korea became "The Hermit Kingdom". Its only outside contact was with the Chinese Emperor - the acknowledged overlord of the peninsula.

During this period of isolation, a sharp cleavage developed between the educated noble families and the common people.

In 1860 Korea acquired a third powerful neighbour when Russia obtained the Maritime Province from China. However, Russia was not in a position to exert much influence over Korea as communications were so extended from European Russia to the Far East, so that the country was essentially a meeting ground of Chinese and Japanese interests.

In 1875 a Japanese vessel, cruising in Korean waters, provoked an "incident" which forced a weak and divided Korea from her isolation. A commercial treaty was signed between Japan and Korea in 1876.

As Japan and Russia began to rival each other, one as a maritime power seeking access to the hinterlands of the continent, the other as a continental power seeking access to favourable ports on the ocean, Korea became increasingly involved in the struggles between the two countries. The next 18 years saw the expansion of Japanese and Russian spheres of influence at the expense of China. This was particularly true of the Japanese who needed raw materials and food.

Since, however, China was still the nominal suzerain, it remained for Japan to pry Korea loose from China before securing it as a shield against Russia. Between 1894 and 1905 two wars were fought over rights to the peninsula. The Sino-Japanese War (1894-95) severed Korea's bonds with China, whereas the Russo-Japanese War (1904-05) saw the peninsula become a protectorate of Japan. This was but a stage in Japan's programme of absorption. The protectorate terminated by a treaty signed in August, 1910, in which the Emperors of Japan and Korea "agreed" on annexation. In the preamble to this treaty the purposes of annexation were set forth:

"His Majesty the Emperor of Japan and His Majesty the Emperor of Korea, having in view the special and close relations between their respective countries, desiring to promote the common weal of the two nations and to assure permanent peace in the Extreme East, and being convinced that these objects can be best attained by the annexation of Korea to the Empire of Japan, have resolved to conclude a Treaty of such annexation,"¹

Thus Korean independence disappeared.

From 1910 to 1945 Korea formed an essential part of the Japanese Empire. Throughout those years the dream of independence was kept alive in the minds of Koreans by patriots in exile. A self-appointed temporary government in exile, formed in Shanghai in 1919, provided the medium of expression of Korean patriotism and hopes for independence.

Korea at the Conclusion of the Second World War

The increasing strength of Japan made it impossible however for any powers to intervene on behalf of the Koreans. But during the struggle between China and the Anglo-American powers on the one hand and Japan, on the other, Korean freedom and independence were promised in the Cairo Declaration of December, 1943. This agreement was accepted by the U.S.S.R. and reaffirmed in the Potsdam Declaration of July, 1945. At a conference of the "Big Four" Foreign Ministers in Moscow in December, 1945, it was decided that Korea should be administered under a joint trusteeship of the United States of America, United Kingdom, Union of Soviet Socialist Republics and China. At the same time it was agreed that a provisional democratic government should be set up.² To achieve this a Joint United States-U.S.S.R. Commission was established. A joint conference to lay the framework for

¹ Report of administration of Government-General of Chosen (1935-36) p. 219.

² This agreement is known as the Moscow Agreement.

the Commission convened early in 1946 but achieved little. The Joint Commission met from March 20th to May 8th, 1946, when it adjourned 'sine die'. It reconvened on May 21st, 1947, but again achieved no success. As a last resort the United States of America submitted the Korean case to the Second Session of the General Assembly of the United Nations in September, 1947.

Allied desires for a free and independent Korea failed to materialize with the development of East-West tension in the post-war period. To arrange for the surrender of Japanese troops in Korea, (and nothing more), the 38th parallel was established as a demarcation line, Japanese troops north of this line were to surrender to the Soviet Army, whereas those south of the line were to capitulate to American Forces. After the surrender had been completed, in September, 1945, the Soviet Commander in Korea interpreted the 38th parallel as a permanent delineation between the respective military zones. It was on this artificial basis that the peninsula was split. No agreement could be reached by the Joint U.S.A.-U.S.S.R. Commission on who should speak for Korean people as a whole.

"Early in the discussion the Soviet Delegation took the position that the Joint Commission should consult, in connection with the formation of a provisional Korean government, only those Korean parties and social organizations which had supported in full the provisions of the Moscow Agreement. In view of the widespread opposition among the Korean people to the trusteeship provisions of that agreement, which they tended to associate with the Japanese protectorate which had preceded the annexation of Korea in 1910, the policy espoused by the Soviet Delegation would have excluded from consultation a large majority of the Korean people The United States Delegation was of the opinion that the Korean people were entitled freely to express their views" ¹

Thus the acceptance of a temporary and arbitrarily chosen line of military delimitation as a political boundary, the failure of the Joint U.S.A.-U.S.S.R. Commission on who should speak for the Korean people and

¹ U.S. Department of State. Korea 1945-48, p. 4-5.

the inability of a U.N. Commission¹ to arrange and carry out free elections in all Korea led to the establishment of two governments. The Republic of Korea was proclaimed on 15th August, 1948, and assumed control of South Korea from the U.S. Military Government on 11th September, 1948. On September 9, 1948, the Peoples' Democratic Republic of Korea was sponsored by the U.S.S.R. to control the affairs of North Korea.

South Korean Government

The government of the Republic of Korea was defined in a constitution passed by the National Assembly, and a provisional Government elected after the U.N. Commission investigation on July 12th, 1948. It provides for a unicameral legislature elected by secret ballot every four years. There is to be a president and a vice-president elected by the legislative body for a four-year term. A prime minister, appointed by the president, must be approved by the legislature. On the other hand, the cabinet is formed by the legislature but there is some doubt if ministerial responsibility in the Canadian sense exists. The president, as the executive head of the government, has the power to veto legislation but may be overruled by a two-thirds vote of a quorum of the legislature.

Local governments are to be provided by national ordinance. They are to be given the right to "manage their property and perform their genuine administrative tasks".² Beyond that the powers of local government are left undefined.

¹ This commission was established after the failure of the Joint U.S.-U.S.S.R. Commission to reach any working agreement.

² Cited in Dull. P.S. - South Korean Constitution, Far Eastern Survey, Vol. XVII, No. 17, Sept. 8, 1948, p. 206.

In short, the constitution is similar in many respects to those of the Western nations. Nevertheless, the powers ascribed to the president, reflect the influence of long years of authoritarian rule.

North Korean Government

When the Democratic Peoples' Republic of Korea was proclaimed it claimed jurisdiction over all Korea. However, it is the effectual government of North Korea.

The constitution adopted in North Korea provides for a 'Peoples' Democratic Republic'.

"All power in the Korean Peoples' Democratic Republic belongs to the people and is exercised by its highest organ, the Supreme Peoples' Assembly, with the co-operation of its local organs of authority represented by the People's Committee".¹

Executive control of the government is vested in a Presidium elected by the Supreme Peoples' Assembly.

Provincial boundaries of both North and South Korea are shown in Fig. 16.

Summary

The division of Korea into two states has little or no basis in the geographical alignment of the peninsula as the 38th parallel does not provide a 'natural' boundary. It cuts across physiographic, climatic, economic, cultural and administrative units. There are distinctions, it is true, between the northern and southern environments, but they are not abrupt. They tend to strike diagonally across the peninsula rather than along an East-West line.

¹ Extract from Article 1 of the Constitution, cited in Soviet Press Translation, Vol. 4, No. 18, p. 554, Oct. 15, 1949.



Fig.16

Physiographically Korea is divided along several northeast-southwest lines. Actually the east and west sides of the country are more divided than north and south.

Moreover, the Korean people, comprising one cultural group, show a high degree of homogeneity. Their natural affinity is to Korea as a whole. It is only recently that regional differences are being stressed and that the North and South have been re-oriented to different areas outside of the country.

Economic integration has also been sacrificed by the acceptance of the 38th parallel as a political boundary. North Korea has the bulk of the mineral wealth, resources and industrial potential. On the other hand, South Korea has the bulk of the population, a relatively large agricultural area and the consumer goods industries. South Korea needs power, fertilizers and minerals from North Korea whereas the North requires food products and consumer goods from the South. The easy flow of goods from one end of the peninsula to the other has not been possible, hence the economic life of the whole has suffered. When this is considered against the background of the difficulties faced in converting the Korean economy from an integral part of the Japanese Empire to a sound national economy this North-South division rendered the problem well nigh incapable of solution.

The boundary also disrupted the normal transportation system of Korea. As has been discussed previously the natural routeway from the northeastern parts to the western plain via the Wonsan-Seoul corridor was interrupted by the new boundary. Re-routings of many miles through difficult terrain are necessary so that rail and road transport may move freely in either North or South Korea and yet remain within established boundaries.

Prior to the Second World War Korea was administered by the Government-General of Chosen with headquarters in Seoul. This constituted the national government. Local affairs were administered by thirteen provinces. (See Fig. 16). The 38th parallel cuts across three of these provincial boundaries. Two of these provinces could have been left intact had a slight variation been made in the original military delimitation.

Thus this study has shown that in practically all aspects of its geography the Korean Peninsula is a region of high integration and interdependence. Its division into two states is artificial and has little basis in geography. Whether or not the Korean Peninsula will be re-united politically and economically remains to be seen. An outstanding authority on Asiatic affairs, the late Professor G. W. McCune, summed up the Korean situation when he said,

"The future of Korea depends upon larger issues on several different levels, beginning with the contest for supremacy among Korean leaders and ending with the conflict in power politics between the United States and the Soviet Union".¹

¹ McCune G. W. - Korea. The First Year of Liberation, Pacific Affairs - Vol. XX, No. 1, March 1947, p. 17.

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APPENDIX A ⁽¹⁾LIST OF EQUIVALENTS OF GEOGRAPHICAL NAMES
IN KOREA IN JAPANESE AND KOREAN
LANGUAGES

<u>Japanese</u>	<u>Korean</u>
Agochi	Aoji
Ampen	Anbyon
Angaku	Anak
Batsudo	Poltong
Chinkai	Chinhae
Chinkai Wan	Chinhae Man
Chinnampo	Chinnamp'o
Chirei	Chirye
Chohakusan	Changpaiksan
Chosen	Choson
Choshinco	Changjingang (River)
Chosui	Changsu
Chumanko	Ch'ungmangang (River)
Chusan Wan	Ch'uksan Man (Bay)
Chusei Hokudo	Ch'ungch'ong Pukto (Province)
Chusei Nando	Ch'ungch'ong Namdo (Province)
Chushu	Ch'ungju
Daidoko	Taedonggang (River)
Dokushin	Tokchin
Eian	Yongan
Eido	Yongdong
Eiju	Yongun P'yong Wan (Plain)
Eiko	YOUNGNUNG
Eisen	Yongch'on
Eitoho	Yongdungp'o
Eitoku	Yongdok
Fusan	Pusan
Fusenko	Pujon Gang (River)
Gensan	Wonsan
Gensh'u	Wonju
Gishu	Uiju
Gunzan	Kunsan
Hakuto	Paektusan (Mountain)
Hanhen	Panbyonchon (River)
Heian Hakudo	P'yongan Pukto (Province)
Heian Nando	P'yongan Namdo (Province)
Heijo	P'yongyang
Hojoko	Posonggang (River)
Hokusei	Pukch'ong
Jijoko	Chasonggang (River)
Jinsen	Inch'on (also Chemulpo)
Josenko	Songch'ongang (River)

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Japanese

Joshin
 Junten
 Kaijo
 Kainan
 Kainei
 Kaishu
 Kakuzan
 Kampei
 Kanjo
 Kanko
 Kanko
 Kankyo Hokudo
 Kankyo Nando
 Kansho
 Keikido
 Keisho Hokudo
 Keisho Nando
 Keishu
 Kenjiho
 Keishu
 Kinko
 Kogendo
 Kokaido
 Kokei
 Komosan
 Konan
 Kongo
 Koshu
 Koshu
 Keijo
 Kinko
 Kunsan
 Kunsen
 Koryo
 Kyosai
 Mampochin
 Moppo
 Mosan
 Naijo
 Oryokko
 Rakusan Wan
 Rakutoko
 Ranan
 Rashin
 Rashin Wan
 Reisan
 Reiseiko
 Reisen
 Riri
 Ryuzan
 Sainei
 Saishu
 Sanchoku

Korean

Songjin
 Soochun
 Kaesong (also Songdo)
 Haenam
 Hoi-lyong
 Haeju
 Kwaksan
 Hamp'yong
 Kansong
 Hangang (River)
 Hamheung (City)
 Hamgyong Pukto (Province)
 Hamgyong Namdo (Province)
 Hamch'ang
 Kyonggido (Province)
 Kyongsang Pukto (Province)
 Kyongsang Namdo (Province)
 Kyongju
 Kyomipo
 Kyongju
 Keumgang (River)
 Kangwondo (Province)
 Hwanghaedo (Province)
 Kanggyong
 Komusan
 Hungnam
 Kungang san (Diamond Mountains)
 Kwangju
 Kongju
 Kyongsong (also Seoul)
 Kungang
 Kunsan
 Kunson
 Kwangnyang (Bay)
 Kojyei (Island)
 Manp'ojin
 Mokpo
 Musan
 Naesonch'on (River)
 Amnokkang (River, also the Yalu)
 Naksan Man (Bay)
 Naktonggang (River)
 Nanam
 Najin
 Najin Man (Bay)
 Yongsan
 Yesonggang (River)
 Yech'on
 Iri
 Yongsan
 Chairyung
 Chejudo (also Quelpart Island)
 Samch'ok

Japanese

Sanroshin
 Seisenko
 Seishin
 Seishu
 Sensen
 Seshinzo
 Sa'ariin
 Shinanshu
 Shingishu
 Shinsbu
 Shohakusan
 Shojo
 Shunsen
 Suian
 Suigen
 Taiden
 Taihakusan
 Taikyu
 Tashito
 Tetsugen
 Tetsuzan
 Toei
 Tomenko
 Torai
 Unzan
 Urusan
 Utsuryoto
 Yujo
 Yuki
 Zenra Hakudo
 Zenra Nando
 Zenshu

Korean

Sannangjin
 Ch'ongch'ongang (River)
 Ch'ongjin
 Chyongju
 Syonchyong
 Somjingang (River)
 Sariwon
 Sinanju
 Sinuiju
 Chinju
 Syopaiksan (Mountains)
 Chongsong
 Chyungchyon
 Syuan
 Suwon
 Taejon
 Taipaiksan (Mountains)
 Taegu
 Tasado (Island)
 Ch'orwon
 Ch'olsan
 Tongyang
 Tumangang (also Tumen River)
 Tongnai
 Unsan
 Ulsan
 Ullungdo (also Dagelet Island)
 Susong
 Unggi
 Cholla Pukto (Province)
 Cholla Nando (Province)
 Chonju

Korean Names

Amnokkang
 Anak
 Anbyon
 Aoji
 Chairyung
 Ch'anghungni
 Changjingang
 Changpaiksan
 Changsong
 Changsu
 Chasonggang
 Chejudo
 Chemulpo (also Inch'on)
 Chinhae
 Chinhae Man
 Chinju
 Chinnampo

Japanese Equivalents

Oryokko (the Yalu River)
 Angaku
 Ampen
 Agochi
 Sainei
 Shokori
 Choshinko (River)
 Chohakusan
 Shojo
 Chosui
 Jijoko (River)
 Saishu (also Quelpart Island)
 Jinsen
 Chinkai
 Chinkai Wan
 Shinshu
 Chinnampo

Korean Names

Chirye
 Ch'olsan
 Cholla Namdo
 Cholla Pukto
 Ch'ongch'ongang
 Ch'ongjin
 Chonju
 Ch'orwon
 Choson
 Ch'ungch'ong Namdo
 Ch'ungch'ong Pukto
 Ch'ungju
 Ch'ungmangang
 Chyongju
 Chyungchyon
 Haeju
 Haenam
 Hamch'ang
 Hamheung
 Hamgyong Namdo
 Hamgyong Pukto
 Hamp'yong
 Hangang
 Hoi-lyong
 Hungnam
 Hwanghaedo
 Inch'on (also Chemulpo)
 Iri
 Kaesong (also Songdo)
 Kanggyong
 Kangwondo
 Kansong
 Keumgang
 Kojvei
 Komusan
 Kongju
 Kumgang
 Kumgang san
 Kusan
 Kunsan
 Kunsan
 Kwaksan
 Kwangnyang
 Kwanju
 Kyomipo
 Kyonggido
 Kyongju
 Kyongsang Namdo
 Kyongsang Pukto
 Kyongsong (also Seoul)
 Manp'ojin
 Mokpo
 Musan

Japanese Equivalents

Chirei
 Tetsuzan
 Zenra Nando (Province)
 Zenra Hakudo (Province)
 Seisenko (River)
 Seishin
 Zenshu
 Tetsugen
 Chosen
 Chusei Nando (Province)
 Chusei Hokudo (Province)
 Chushu
 Chumanko (River)
 Seishu
 Shunsen
 Kaishu
 Kainan
 Kansho
 Kanco (City)
 Kankyo Nando (Province)
 Kankyo Kokudo (Province)
 Kampei
 Kanko (River)
 Kainei
 Konan
 Kokaido (Province)
 Jinsen
 Riri
 Kaijo
 Kokei
 Kogendo (Province)
 Kanjo
 Kinko
 Kyosai (Island)
 Komosan
 Koshu
 Kinko
 Kongo (Diamond Mountain)
 Gusan
 Kunsan
 Kunsan
 Kakuzan
 Koryo (Bay)
 Koshu
 Kenjiho
 Keikido (Province)
 Keishu
 Keisho Nando (Province)
 Keisho Hokudo (Province)
 Keijo
 Mampochin
 Moppo
 Mosan

Korean Names

Naesong ch'on
 Naksan Man
 Naktonggang
 Na jin
 Najin Man
 Nanam
 Paektusan
 Panbyonchon
 Poltong
 Posonggang
 Pujon Gang
 Pukcho'ng
 Pusan
 P'yongan Namdo
 P'yongan Pukto
 P'yongyang
 Samch'ok
 Samnangjin
 Sariwon
 Seoul (also Kyongsong)
 Sinanju
 Sinuiju
 Somjingang
 Songch'ongang
 Songdo (also Kaesong)
 Songjin
 Soonchun
 Susong
 Suwon
 Syonchyong
 Syopaiksan
 Syuan
 Taedonggang
 Taegu
 Taejon
 Taipaiksan
 Tasado
 Tokchin
 Tongnai
 Tongyeng
 Tuman gang
 Unju
 Ullungdo
 Ulsan
 Unggi
 Unsan
 Wonju
 Wonsan
 Yech'on
 Yesonggang
 Yongan
 Yongch'on
 Yongdok

Japanese Equivalents

Naijo (River)
 Rakusan Wan (Bay)
 Rakutoko (River)
 Rashin
 Rashin Wan (Bay)
 Ranan
 Hakuto (Mountain)
 Hanhen (River)
 Batsudo
 Hojoko (River)
 Fusenko (River)
 Hokusei
 Fusan
 Heian Nando (Province)
 Heian Hakudo (Province)
 Heijo
 Sanchoku
 Sanroshin
 Shariin
 Keijo
 Shinanshu
 Shingishu
 Senshinko (River)
 Josenko (River)
 Kaijo
 Joshin
 Junten
 Yujo
 Suigen
 Sensen
 Shohakusan
 Suian
 Daidoko (River)
 Taikyu
 Taiden
 Taihakusan
 Tashito (Island)
 Dokushin
 Torai
 Toei
 Tomanko (the Tumen River)
 Gishu
 Utsuryoto
 Urusan
 Yuki
 Unzan
 Genshu
 Gensan
 Reisen
 Reiseiko (River)
 Eian
 Eisen
 Eitoku

Korean Names

Yongdong
Yongdunp'o
Yongnung
Yongsan
Yongsan
Yongun P'yongwan

Japanese Equivalents

Eido
Eitoho
Eiko
Reisan
Ryuzan
Eiju (Heigen)

Technical Surveys, Dept. of
Graphical appreciation.

NAME OF BORROWER

over

